

How to print and add Comments

1 Printing single Pages, Chapters or the complete Manual



IMPORTANT:

This PDF manual is screen optimized – nevertheless it is possible to print single pages, single chapters or the complete manual on paper size DIN A4 or Letter.

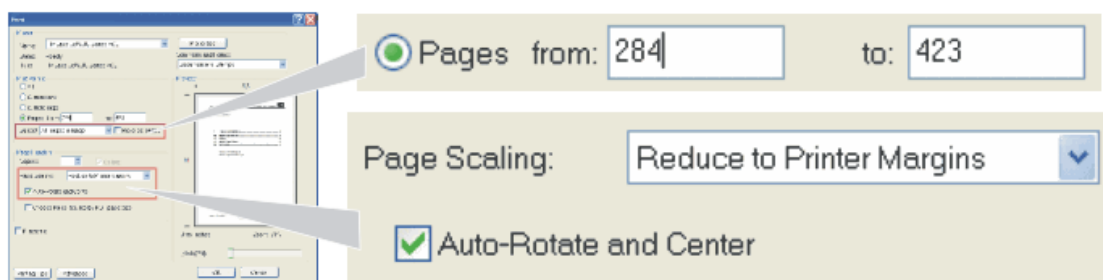
Some pages – especially circuit diagrams for equipment – have been created on paper size larger than DIN A4/Letter. Printing these pages on DIN A4/Letter may result in reduced legibility.

Preferably print circuit diagrams on a DIN A3/ANSI B (Ledger) printer, if available.

1.1 Printing single Pages or Chapters

To print single chapters or pages of a chapter proceed as follows:

- (1) Click the bookmark of the desired chapter
- (2) Write down or remember the shown page number
- (3) Go the end of the section or desired range of pages
- (4) Select "Print"
- (5) Select the page range
- (6) Select "Reduce to printer margins" and "Auto-rotate and Center".
- (7) Select "OK"



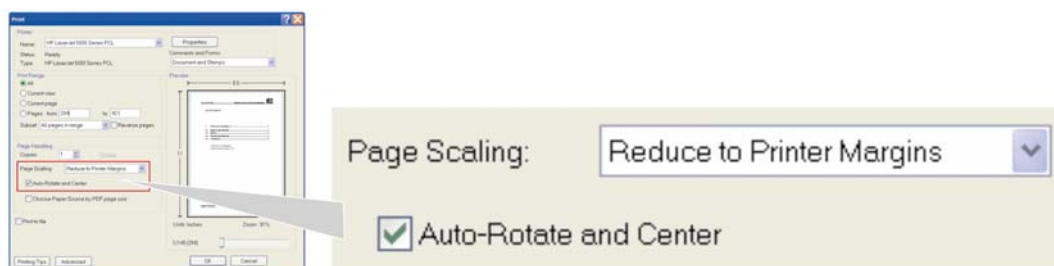
NOTE:

"Reduce to printer margins" may be named on other Adobe Reader versions "shrink to printable area" or "shrink oversized pages to paper size"

1.2 Printing the complete Service Manual

To print the complete service manual proceed as follows:

- (1) Select "Print"
- (2) Select "All"
- (3) Select "Reduce to printer margins" and "Auto-rotate and Center".
(see NOTE previous page)
- (4) Select "OK"



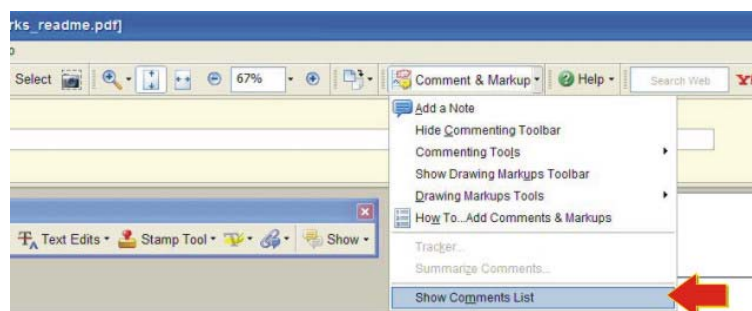
2 Adding Comments

- If you open this file in an Adobe Reader version ≥ 7 , the comment toolbar will show-up.
- This allows adding comments, to highlight or underline text and many more text manipulations.



2.1 How to export your Comments

- (1) In the drop down menu "Comment & Markup" select "Show comments List"

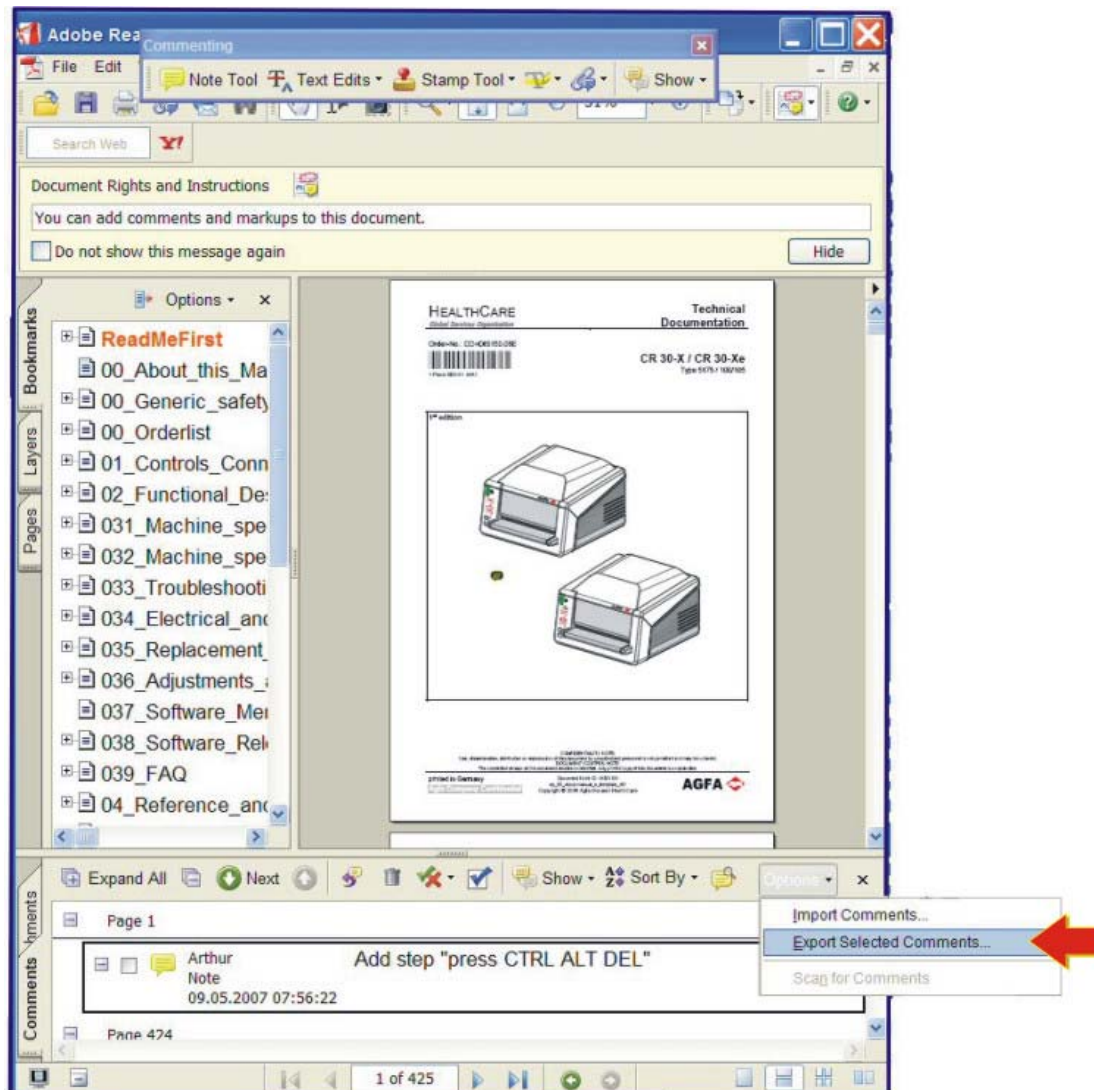


- (2) Select the desired comments: Press the CTRL-key for multiple selections.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

- (3) Select "Options - Export Selected Comments"
- (4) Save the file with any name



2.2 How to import Comments

- (1) In the drop down menu "Comment & Markup" select "Show comments List"
- (2) Select "Options - Import Comments"
- (3) Browse for the comments file and press "select"



NOTE:

The imported comments possibly appear on different pages, if the file where the comments have been imported has a different number of pages.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Order No.: DD+DIS301.03E



1 piece WACEX MA1

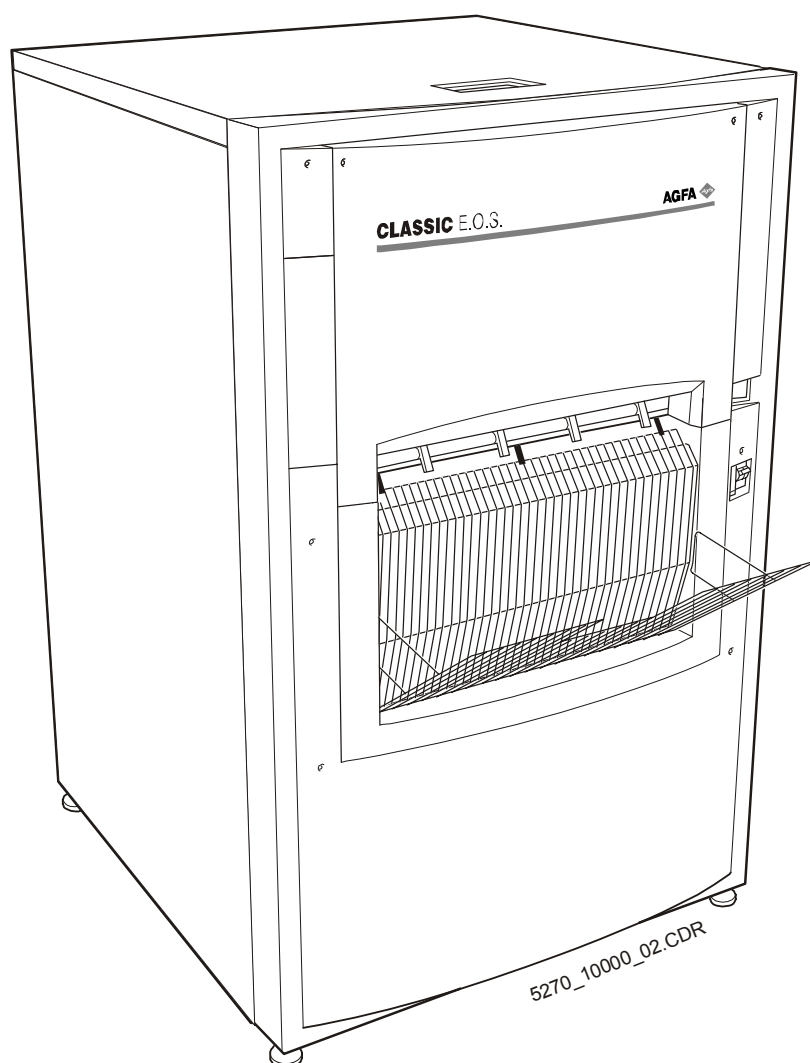
Classic E.O.S.

Type 5270 / 100
as of SN 4500

Classic E.O.S. CL

Type 5270 / 105
as of SN 1138

Edition 6



5270_10000_02.CDR

Order No.: DD+DIS301.03E



1 piece WACEX MA1

Classic E.O.S.

Type 5270 / 100

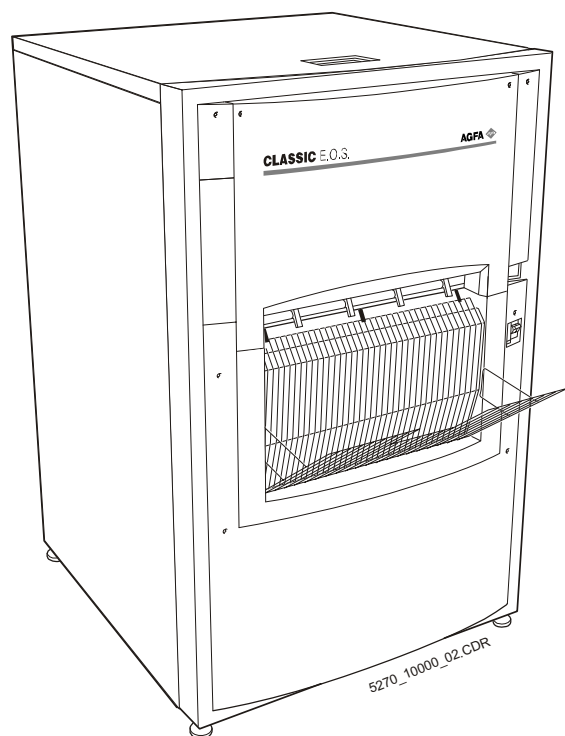
as of SN 4500

Classic E.O.S. CL

Type 5270 / 105

as of SN 1138

6. Edition



Ordering of spare parts
and spare part kits:

Phone: xx49 - (0)89 - 6207 -3760

Fax: xx49 - (0)89 - 6207 -7388

Ordering of documentation:

Phone: xx49 - (0)89 - 6207 -3553

Caution:

This system uses mains voltage. Please observe the pertinent safety instructions.

These instructions describe adjustments and routines which must only be performed by qualified technical personnel.

Note:

Electrical repairs and connections must only be made by certified electricians.

Mechanical repairs and connections must only be made by certified technicians.

CE Declaration:

According to the medical directives the CE Declaration (CE Conformity) becomes void if the product is modified without permission of the manufacturer!

This applies to all parts, not only the safety devices!














AGFA-GEVAERT AG HE/S&S - GSO
Tegernseer Landstr. 161 D-81539 Munich

| Contents |
|--------------------------------------|
| 0. Order list |
| 1. Installation preparations |
| 2. Controls and connectors |
| 3. Installation / start-up |
| 4. Operating instructions |
| 5. Theory of function |
| 6. Repair and Service |
| 7. Reference and circuit diagrams |
| 8. Spare parts list |
| 9. Accessories |
| 10. Modifications |
| 11. Technical standard modifications |
| 12. Maintenance |
| 13. Field Service Bulletins |
| 14. Installation planning |
| 15. Glossary / key word index |

Pictographs and conventions for this documentation

This documentation uses certain conventions (pictographs, styles) to help you find information faster and easier.

Meaning of the pictographs

| | | | |
|---|---------------------|---|-----------------------|
|  | High voltage! |  | Waiting time |
|  | Attention! |  | Required tools |
|  | Info |  | Removal |
|  | Hint |  | Installation |
|  | Required spare part |  | Mechanical adjustment |
|  | Required time |  | Electrical adjustment |
| | |  | Calibration |

Conventions

| Activity | Type face | Example |
|----------------------------------|-------------------|---------------------------------|
| Instruction, Explanation | Switch on machine | Switch on machine |
| Mouse activities, or Return key | <omni-cd.exe> | Doublick the icon <omni-cd.exe> |
| Text input via keyboard required | vips | Enter vips and click <Continue> |

Classic E.O.S. / Classic E.O.S. CL (Type 5270/100/105) Edition 6

The 6th edition is the Service Documentation applying to the machines \geq SN4500 (Type 5270/100) or \geq SN1138 (Type 5270/105)

It is not a replacement for Edition 5.

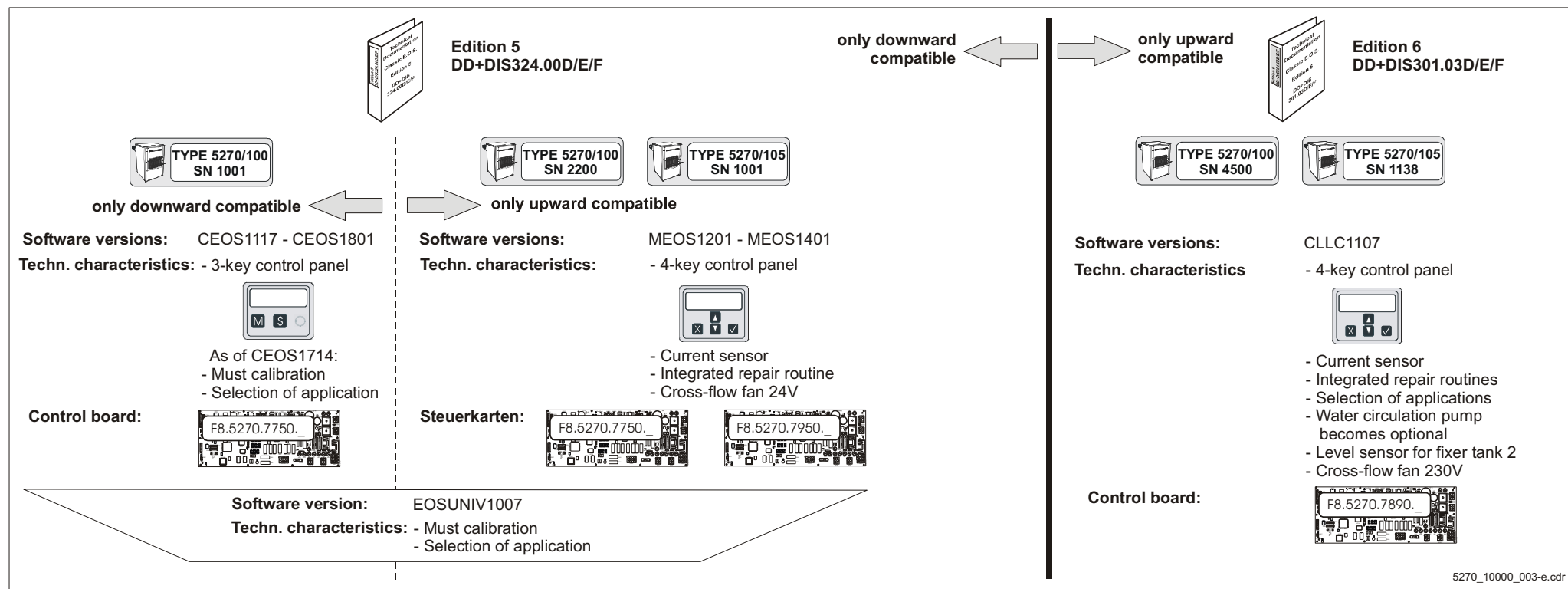
The 5th edition remains the Service Documentation applying to the machines $<$ SN4500 (Type 5270/100) or $<$ SN1138 (Type 5270/105) and it includes the information about technical modifications in the machines up to these serial numbers.



All previous information regarding the serial number of Type 5270/105 (SN 1500) to differentiate compatibility is void. The new valid threshold for compatibility differentiation of Type 5270/105 is the serial number SN 1138. This serial number refers to the complete documentation.

Edition 6 provides information about technical modifications in the production standard as of serial numbers 4500 or 1138 respectively. The technical modifications are:

- A new Control Board (with label F8.5270.7890) has been introduced, and this board only works with Software Version CLLC1107 and up. It is not compatible with the previous control boards and their software.
- The water circulation pump became an option.
- A level sensor in the fixer tank 2 has been added.
- The 24V crossflow fan has been replaced by crossflow fan with 230V.



Order List for Documentation

Classic E.O.S.

Type 5270/100, from SN4500

Classic E.O.S. CL

Type 5270/105, from SN1138



NOTE:

Daily updated order lists are available in MedNet.

Order number for a complete Service Manual:

| Order number | | Edition |
|---------------|-------------------------|---------|
| DD+DIS301.03E | Complete Service Manual | 6 |

Order numbers for separately available chapters of the Service Manual:

| Order number | Contents | Revision of document | Approval Date |
|---------------|--|----------------------|---------------|
| DD+DIS302.03E | Chapter 12: Maintenance Instructions, Edition 6 | 0 | 2004-03-12 |
| DD+DIS303.03E | Chapter 14: Installation Planning, Edition 6 | 0 | 2004-02-05 |
| DD+DIS022.05M | Chapter 08: Spare Parts List | 4 | 2007-11-28 |
| DD+DIS060.03E | Chapter 08: Spare Parts List, Thoramat Docking Unit | 3 | 2006-12-08 |

Access to MedNet GSO Library:

- ***IntraNet:** <http://docs.agfanet/mednetcso-library>
- ***ExtraNet:** <http://extranet.agfa.com/bu/mi/mednet/mednetcso.nsf>

* to request an account to the MedNet GSO Library go to:
<http://intra.agfanet/bu/mi/mednethelp.nsf/EN/gettingaccess.htm>

Inquiries:

- Phone + 49 89 6207 3949 Fax +49 89 6207 7274

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

2007-11-28 printed in Germany

Agfa Company Confidential

Document Node ID: 14037585
eq_00_orderlist_e_template_v04
Copyright © 2007 Agfa HealthCare N.V.

AGFA 
HealthCare

Checklist for Completeness

Classic E.O.S. / Classic E.O.S. CL

Type 5270/100/105



NOTE:

Verify latest level and completeness of your Service Manual by means of this checklist for completeness.

Only the document numbers listed here are valid. Discard documents with different numbers if necessary.

| Chapter | Order number / Designation | Revision of document | Approval date | Pages |
|---------|---|----------------------|--------------------------|---|
| 0 | Order list Checklist for completeness List of Service Bulletins | - | 2007-11-28 | 0/1-4 |
| 0 | DD+DIS301.03E | 0 | 2004-03-12 | Cover sheet and list of contents |
| 1 | DD+DIS301.03E | 0 | 2004-03-12 | 1/I, 1/1 – 1/13 |
| 2 | DD+DIS301.03E | 0 | 2004-03-12 | 2/I, 2/1 – 2/6 |
| 3 | DD+DIS301.03E | 0 | 2004-03-12 | 3/I-II, 3/1 – 3/57 |
| 4 | Intentionally left blank | - | - | - |
| 5 | DD+DIS301.03E | 0 | 2004-03-12 | 5/I-II, 5/1 – 5/42 |
| 6.1 | DD+DIS301.03E | 0 | 2004-03-12 | 6.1/I, 6.1/1 – 6.1/8 |
| 6.2 | DD+DIS301.03E | 0 | 2004-03-12 | 6.2/I, 6.2/1 – 6.2/10 |
| 6.3 | DD+DIS301.03E | 0 | 2004-03-12 | 6.3/I, 6.3/1 – 6.3/24 |
| 6.4 | DD+DIS301.03E | 0 | 2004-03-12 | 6.4/I, 6.4/1 |
| 6.5 | DD+DIS301.03E | 0 | 2004-03-12 | 6.5/I-II, 6.5/1 – 6.5/28 |
| 6.6 | DD+DIS301.03E | 0 | 2004-03-12 | 6.6/I, 6.6/1 – 6.6/6 (A3) 6.6/7 – 6.6/15 |
| 6.7 | DD+DIS131.05E | 2 | 2005-05-03 | 6.7/I, 6.7/1 – 6.7/2, 6.7/3 |
| 7 | DD+DIS301.03E F1.5272.7005.0 Overview Control Board PCB1 | 0 | 2004-03-12 | 7/I, 7/1-13 Sh. 1-1 (A1) (A3) |
| 8 | DD+DIS022.05M DD+DIS060.03M | 4 3 | 2007-11-28 2006-12-08 | 8/1 - 8/76 8/1 – 8/22 |
| 9 | DD+DIS301.03E DD+DIS309.00E | 0 | 2004-03-12 | 9/I Cover sheet, 9/I, 9/1 – 9/8 |
| 10 | Intentionally left blank | - | - | - |
| 11 | DD+DIS441.04E | 1 | 2004-12-22 | 11/I, 11/1 |

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Chapter | Order number / Designation | Revision of document | Approval date | Pages |
|---------|--|----------------------|--|---|
| 12 | DD+DIS302.03E | 0 | 2004-03-12 | Cover sheet 12/I, 12/1 - 12/25 Checklist 1-3 |
| 13 | SB 01 DD+DIS157.04E SB 02 DD+DIS249.04E SB 03 DD+DIS277.04E SB 04 DD+DIS288.04E SB 05 DD+DIS214.04E SB 06 DD+DIS184.05E SB 07 DD+DIS009.07E SB 08 DD+DIS223.07E | n.a. | 2004-05-07 2004-08-04 2004-08-31 2004-08-31 2004-07-06 2005-07-06 2007-01-29 2007-10-23 | 13/1-5 13/1-4 13/1-/3 13/1-/2 13/1-/2 13/1-/3 13/1-/3 13/1-/15 |
| 14 | DD+DIS303.03E | 0 | 2004-02-05 | Cover sheet 14/I-II, 14/1 – 14/41 |
| 15 | DD+DIS301.03E | 0 | 2004-03-12 | 15/I, 15/1 – 15/3 |

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

List of Service Bulletins

Classic E.O.S. / Classic E.O.S. CL

Type 5270/100/105

- The following SB's are valid:

| SB | Document number | Contents | Revision of document |
|-------|-----------------|--|----------------------|
| SB 01 | DD+DIS157.04E | Control Board PCB1 (CM+9 5270 9450 0) and Processor SOFTWARE CLLC1107 (CM+9 5270 9410 0) available as Spare Part | 0 |
| SB 02 | DD+DIS249.04E | Introduction of Processor Software CLLC_1203 Order Number: CM+9 5270 9410 1 Control Board PCB1 incl. CLLC_1203 Order Number: CM+9 5270 9450 1 | 0 |
| SB 03 | DD+DIS277.04E | Magnet Not Sufficiently Fixed in the Machine Cover | 0 |
| SB 04 | DD+DIS288.04E | Introduction of Anti-Algae-Unit Type: 5279/100 | 0 |
| SB 05 | DD+DIS214.04E | Installation of the Tank Reinforcement CM+9 5270 9071 0 This document describes the installation of a tank reinforcement that prevents bending of the intermediate tank walls. | 0 |
| SB 06 | DD+DIS184.05E | Service 574: "IR heater in dryer defective" due to measuring error caused by wrong cable positioning at the Current Sensor Board PCB2. | 0 |
| SB 07 | DD+DIS009.07E | Manufacturer's Warning about Ground Fault Interrupters with Possibly Higher Trigger Current. | 0 |
| SB 08 | DD+DIS223.07E | Empty Battery of the Clock Chip Causes Incorrect Date and Incorrect Time Display Followed by a Calibration Request | 0 |

- The following SB's are no longer valid (integrated in the chapters of the Service Manual, or technically obsolete):

| SB | Document number | Contents | Revision of document |
|----|-----------------|----------|----------------------|
| -- | -- | -- | -- |

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Section 1

contains all important preinstallation data for the machine:

- Inspection of the packing material for transport damage and complete shipment
- Unpacking and packing notes
- Machine positioning at the installation site
- Requirements on the installation site
- Connection data (electrical, if necessary, connections to chemical supply and disposal, fiber optic connections)

Make sure to study this section and before starting the installation check if all preparations have been made as specified.

Chapter 1

Contents

| | | |
|----------|---|-----------|
| 1 | Safety | 1 |
| 2 | Installation Preparations | 3 |
| 2.1 | Machine transport | 3 |
| 2.2 | Checking the shipment | 3 |
| 2.3 | Transport check..... | 3 |
| 2.4 | Checking safety indicators on the machine box | 3 |
| 2.5 | Transport path | 4 |
| 2.6 | Required space at the installation site | 5 |
| 2.6.1 | Classic E.O.S. Type 5270/100 | 5 |
| 2.6.2 | Classic E.O.S. CL Type 5270/105 | 6 |
| 2.7 | Unpacking | 7 |
| 2.8 | Checking the type label | 8 |
| 2.9 | Checking the accessory box | 8 |
| 3 | Technical Data | 9 |
| 3.1 | Electrical data | 9 |
| 3.2 | Ambient and climatic conditions | 9 |
| 4 | Dimensions and Weights..... | 11 |
| 4.1 | Classic E.O.S. Type 5270/100 | 11 |
| 4.2 | Classic E.O.S. CL Type 5270/105 | 11 |
| 5 | Machine Standards and Directives | 12 |
| 5.1 | Safety..... | 12 |
| 5.2 | Radio interference suppression..... | 12 |
| 5.3 | Electromagnetic compatibility..... | 12 |
| 5.4 | Certificates and guidelines | 13 |

1

Safety**General safety instructions**

- The machine must only be used as described in the operating instructions. Any other use may result in damage to the machine or may affect the machine function with the consequence that the machine can no longer be used as intended, and therefore presents a risk for patients, user, and environment.
- The machine must only be operated by qualified personnel trained on the machine.
- Ensure that only trained personnel have access to the machine.
- Ensure that the machine can always be supervised and that any tampering is prevented.
- Repairs or modifications on the machine must only be performed by trained service personnel authorized by Agfa.
- In case of visible damage on the machine housing the machine must not be operated or used, and must immediately be disconnected from the mains.
- Built-in or external safety devices must not be circumvented or disabled.
- Disconnect the machine from the mains before starting any maintenance.
- If a mains connection is absolutely required these maintenance routines must only be made by specially trained personnel.
- Like all technical devices, this machine must be operated, cared for and serviced correctly as described in the documentation provided with the machine.
- If the machine is not operated correctly, or if it is not serviced correctly, Agfa will not be liable for any resulting disturbances, damage or injuries.
- When installing the machine make sure that either the mains plug or an all-cable disconnecting device is provided in the internal installation close to the machine and is easily accessible.
- If the machine is connected with other components or assemblies, Agfa will guarantee safety only for combinations which are approved by Agfa.
- In case of conspicuous smoke or noises, immediately disconnect the machine from the mains.

Special instructions for the handling of chemicals

- When handling chemicals, always observe the applying safety and environmental regulations, as well as the operating and warning instructions pertaining to these chemicals.
- Wear stipulated protective clothing and safety goggles.
- When disposing of chemicals and waste water, you must comply with the local regulations concerning waste water and environmental protection.
- If photo-chemicals get in your eyes, proceed exactly according to the warning instructions and/or the instructions published by the manufacturers of the chemicals. If required, immediately rinse your eyes with cold water. Afterwards see the doctor immediately.
- Avoid inhaling of chemical fumes. Make sure that there is sufficient ventilation at the installation site of the machine, i.e. an air exchange that is

at least ten times the room volume per hour.

- Always comply with the installation instructions.
- Verify tightness of all connections for chemicals and water, as well as waste water, on the machine in regular intervals. At least check whenever suggested in the operating instructions and/or service instructions.
- If solution gets into the inside of the machine (e.g. by spilling during tank filling), the machine must immediately be disconnected from the mains and cleaned thoroughly by the service personnel.
- Do not use additional chlorine or chlorine containing substances inside the processor. The use of additional chlorine or chlorine containing substances can lead to irreversible damage of the equipment. Using these substances may void the manufacturers warranty.

The film processor must not be operated in the direct vicinity of the patients as defined in EN60601-1 and IEC 601-1.

Adherence to safety regulations

- This film processor meets the safety requirements as defined in EN 60950: 1997 (IEC 950) and EN 60601-1-2: 1993, UL 1950 and CSA C22.2 No. 950 and has interference suppression as defined in EN 50081-1, EN 55011, and FCC 47 Part 15, Subchapter B, Class A.
- The water connection complies with DIN 1988 / EN 1717:2001.

2 Installation Preparations

2.1 Machine transport

The freight forwarder transports the machine up to the final installation site. The responsible technician should be present during delivery.

2.2 Checking the shipment

Compare the labels on the boxes with the customer's order list and the bill of lading.

2.3 Transport check

Check the packing material for visible transport damage:

- dented edges
- damaged box
- torn fixing elements (metal straps, screws)

2.4 Checking safety indicators on the machine box

The machine is shipped on a pallet.

The box has a TILTWATCH indicator (A), a SHOCKWATCH indicator (B), and a packing seal (C) attached.

They are attached to the outside of the box and indicate if the machine has been tilted, was exposed to shocks, or has been opened during transport.

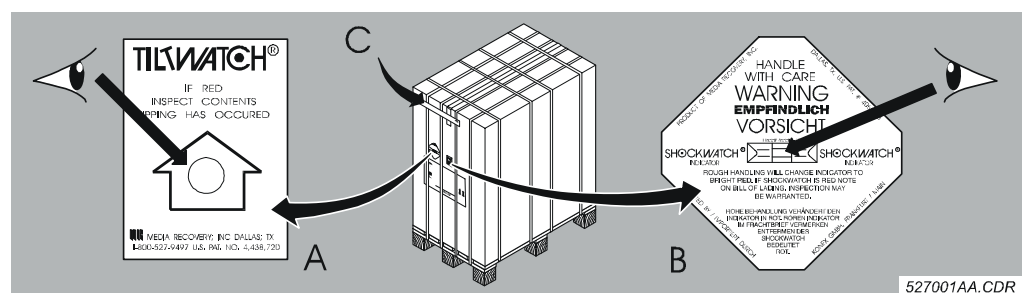


Figure 1

If the machine was tilted, the arrow head in the circle of the TILTWATCH indicator (A) changed from white to red.

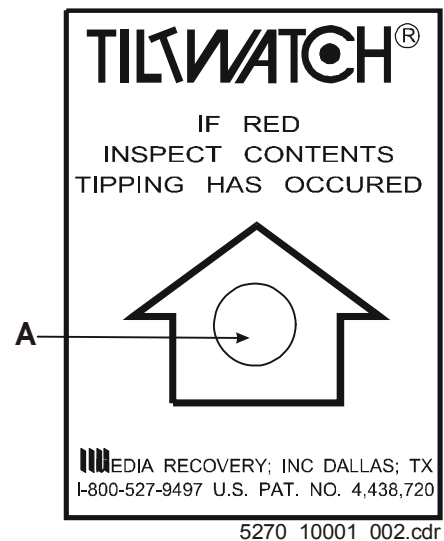


Figure 2

If the machine was subjected to shocks, the square field in the middle of the SHOCKWATCH indicator (B) changed from white to red.

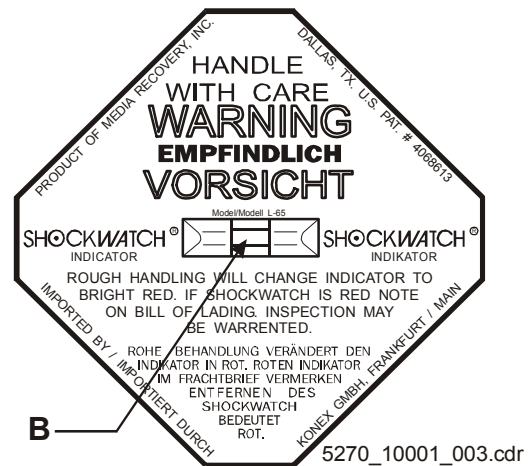


Figure 3



Note all detected damage in the installation report!

In case of a damaged machine make sure to keep the packing material for proof (transport insurance)!

Send the damage report to the insurance company.

2.5

Transport path

The film processor must fit through all doors and hallways on its transport path to the installation site.

Classic E.O.S. / Classic E.O.S. CL
(Type 5270/100/105)

without pallet

with pallet

smallest door width

at least 73 cm (29 inch)

at least 82 cm (32 inch)

2.6 Required space at the installation site

2.6.1 Classic E.O.S. Type 5270/100



TYPE 5270/100

The required floor space for the film processor (with feed table, chute and the required clearance on the left) is 1260 x 860 mm (50.03 x 33.88 inch).

The free space indicated in the illustration must be guaranteed for repair and maintenance, otherwise the time required for service will increase.



Optimum dimensions:

We recommend to plan on this free space.



Minimum dimensions:

Do not go below this minimum space.

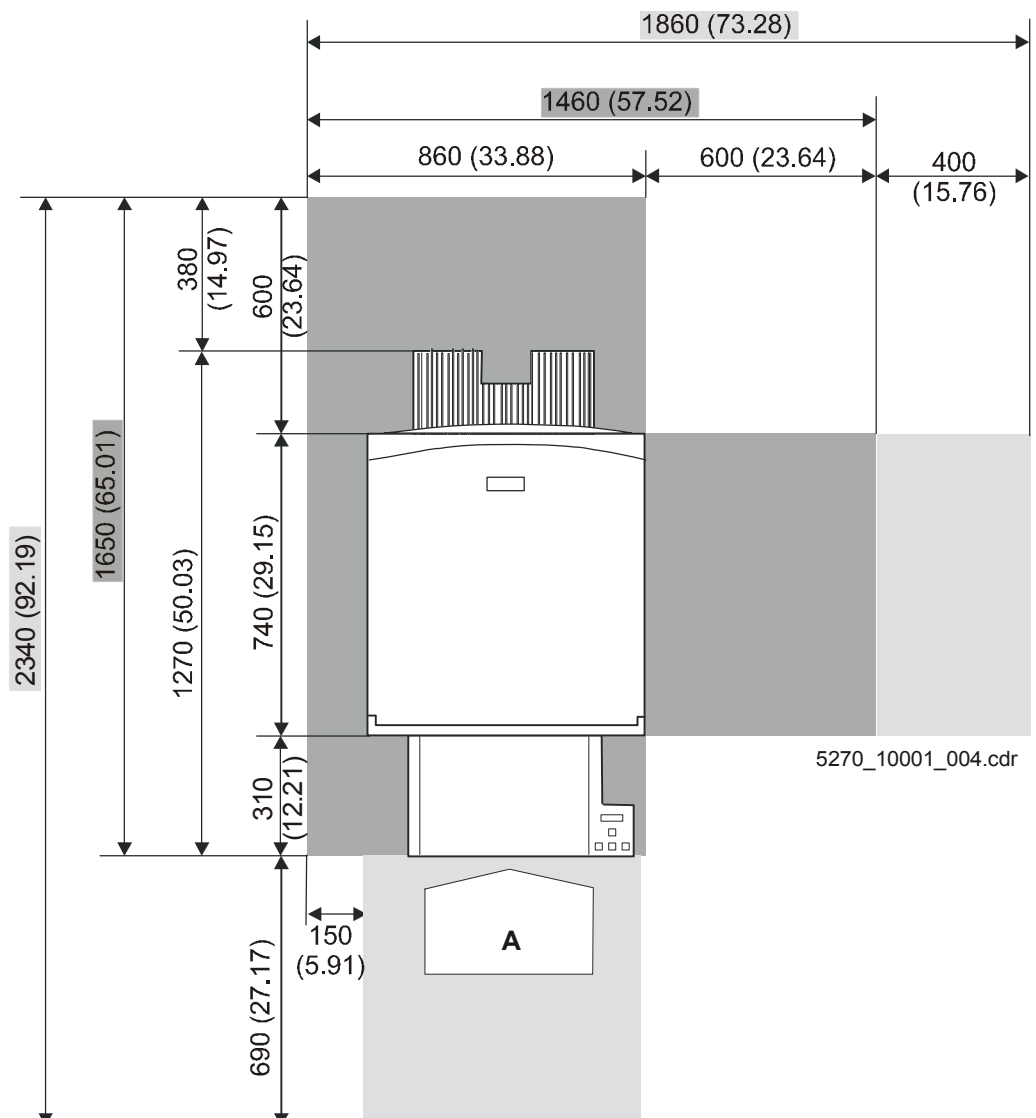


Figure 4

(A) Operation side
Dimensions in mm (inch)

2.6.2

Classic E.O.S. CL Type 5270/105



The required floor space for the film processor in combination with the Laser Imager LR3300 (with feed table, chute and the required clearance on the left) is 1700 x 860 mm (66.98 x 33.88 inch). In case of an installation of the Laser Imager LR3300 or another daylight system observe the installation documentation enclosed with the machine.

The free space indicated in the illustration must be guaranteed for repair and maintenance, otherwise the time required for service will increase.

**Optimum dimensions:**

We recommend to plan on this free space.

**Minimum dimensions:**

Do not go below this minimum space.

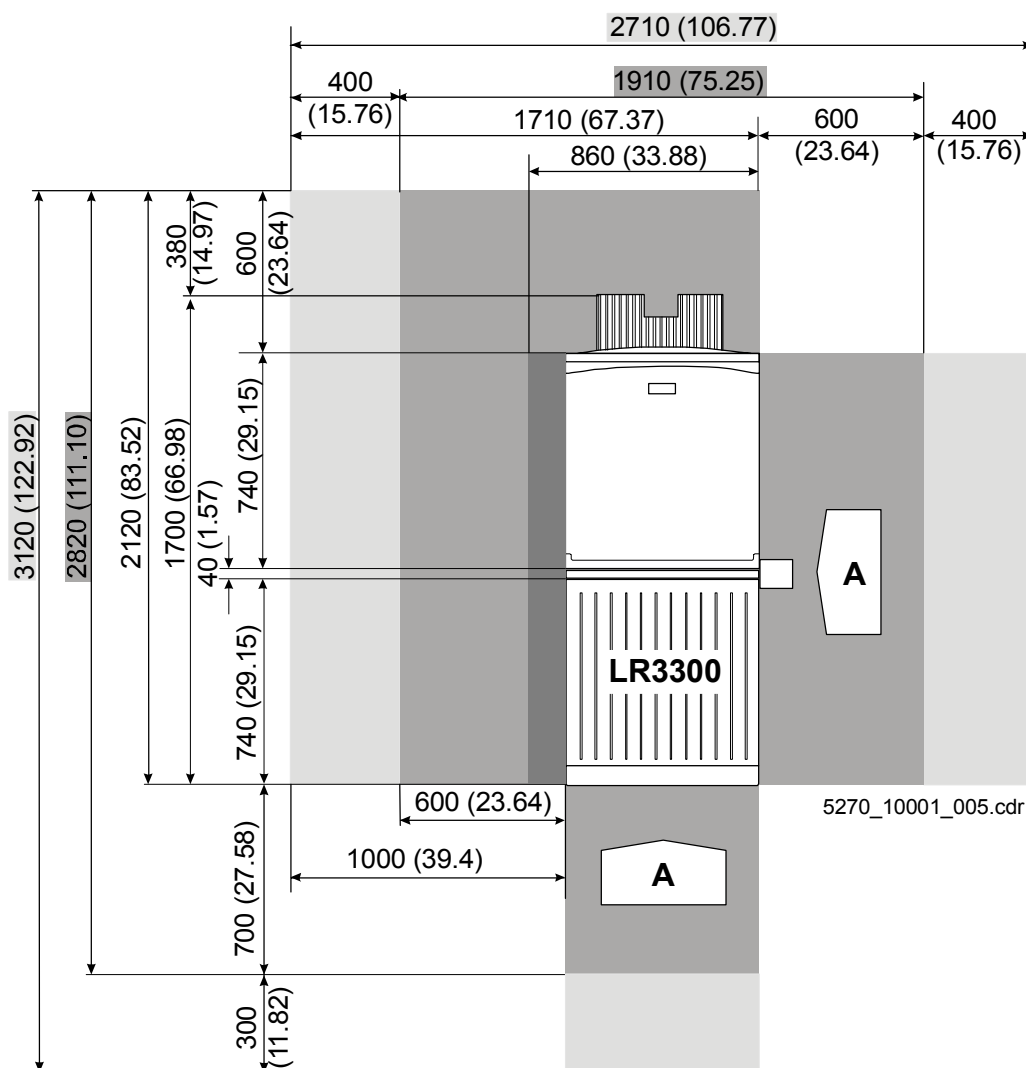


Figure 5

(A) Operation side
Dimensions in mm (inch)

2.7

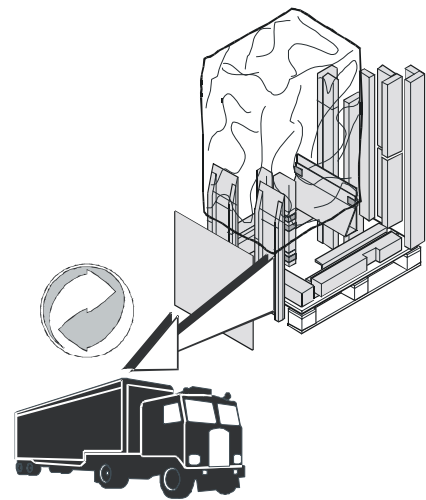
Unpacking

For unpacking follow the illustrated instructions attached to the outside of the packing box and enclosed inside the box.

**Required tools:**

- Knife, scissors, or side cutting pliers to cut the straps
- Phillips screwdriver size 2
- Wrench size 10 mm
- Wrench size 13 mm
- Wrench size 17 mm
- Screwdriver 10 mm

- The forwarder will take back the packing material and dispose of it in compliance with the local regulations.

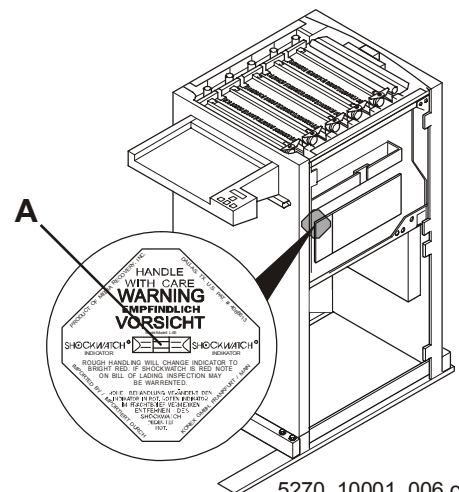


527001vh.cdr

Figure 6

- Check the SHOCKWATCH indicator (A) inside the machine.

If the machine was subjected to shocks, the square field in the middle of the SHOCKWATCH indicator (A) changed from white to red.



5270_10001_006.cdr

Figure 7

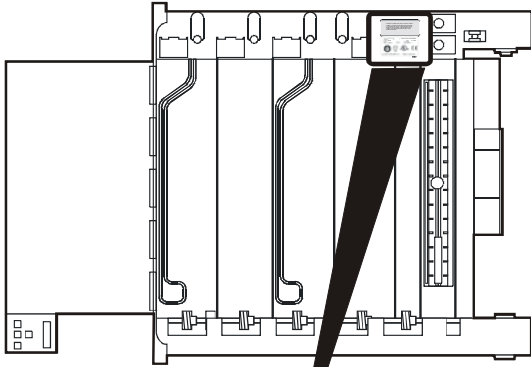


Note all detected damage in the installation report!

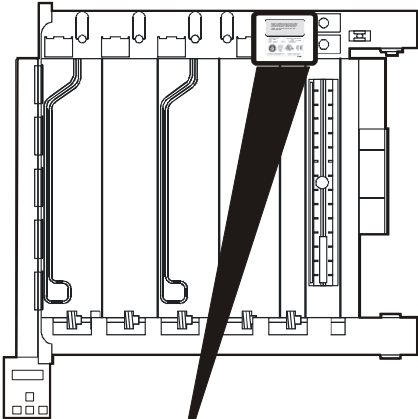
In case of a damaged machine make sure to keep the packing material for proof (transport insurance)! Send the damage report to the insurance company.

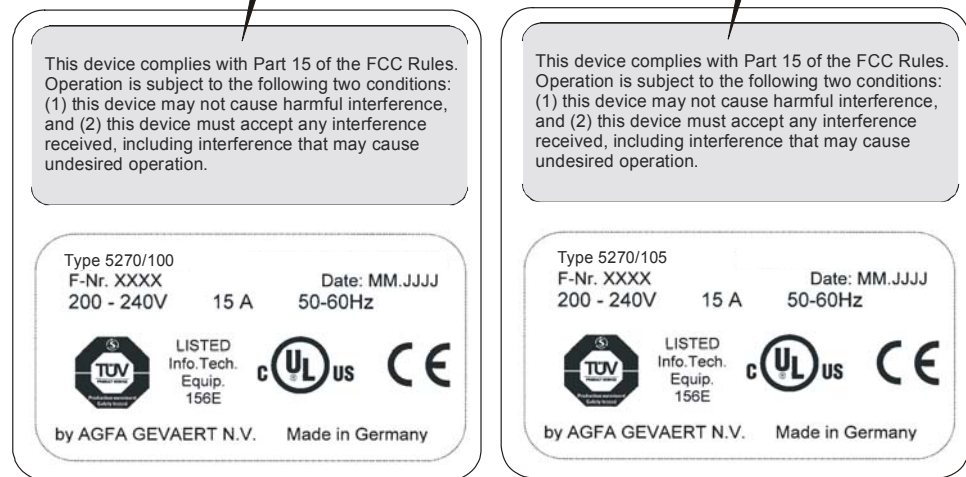
2.8 Checking the type label

Classic E.O.S. Type 5270/100



Classic E.O.S. CL Type 5270/105





5270_10001_001.cdr

Figure 8

Explanation of the type label:

F-Nr. xxxx: This is the consecutive serial number.

Date: MM.JJJJ: This is the production date (month/year).

V 200-240 15 A 50-60 HZ: Mains power supply

- Compare the information at "TYPE" and "F-Nr." on the type label with the bill of lading.
- Compare the rated voltage with the power supply at the installation site.

2.9 Checking the accessory box

- Compare the contents of the accessory box with the list of contents (included in the enclosed documentation pack).

3 Technical Data

3.1 Electrical data



This is a summary of the technical data which serve to inspect the installation site. For further technical, electrical, and climatic data and information regarding the ambient conditions refer to Chapter 14.

| | |
|--|---|
| Mains voltage connection | 1N~ 230 - 240 V; 50/60 Hz (200 - 240 V) |
| Power consumption: Standby (room temperature ~ 20 °C) During film processing | 0.45 kW/h (1620 kJ/h) 2.9 kW/h (10440 kJ/h) max. 3.45 kW/h (12420 kJ/h) |
| Fuse protection | 15 A / 16 A |
| Leakage current towards ground | < 3.5 mA |
| Main switch | Upon machine installation it must be ensured that either the power plug or an all-pole circuit breaker for the installation on site is located close to the machine and easily accessible. |
| Safety rules | Electrical installations in the installation room must be in compliance with IEC 364 (VDE 0100 / 0107). A GFI switch ($I_N = 30$ mA in compliance with VDE 664) is integrated in the machine. |

3.2 Ambient and climatic conditions

| | |
|--|---|
| Ventilation | Avoid inhaling of chemical fumes. Make sure that there is sufficient ventilation at the installation site of the machine, i.e. an air exchange that is at least ten times the room volume per hour. |
| Light-tightness | maximum 2500 Lux |
| Acoustic test ISO 7779 (airborne noise) | during standby max. 35 dB (A) during film cycle max. 48 dB (A) |

| | | | |
|---|---|--|--------------------|
| Heat emission (all values are approximate) | Standby (max.) | into the room | 250 W / 900 kJ/h |
| | Film cycle (max.) | into the connected exhaust | 1200 W / 4320 kJ/h |
| | | into the room | 900 W / 3240 kJ/h |
| | | total | 2100 W / 7560 kJ/h |
| | Exhaust connection | The exhaust is a standard feature of the dryer. During film cycle the exhaust runs at full power. During standby mode the exhaust can be set to half-power via the service program. | |
| Room temperature | min. 10 °C (50 °F), max. 30 °C (86 °F) Room temperature min. 5 °C (41 °F) below the set developer temperature | | |
| Relative humidity | min. 10 %, max. 80 %, no condensation | | |
| Floor conditions | Waterproof, chemical-resistant floor covering (pH value 4 - 11) A floor drain close to the film processor is recommended. | | |
| Floor load | 50 N / cm² (7.75 N / in²) | | |
| Cleaning sink | A cleaning sink with water tap and hose shower should be provided for maintenance work. Minimum inside dimensions of the sink: Width 70 cm (27.56 inch) Depth 40 cm (15.75 inch) Height 20 cm (7.87 inch) | | |

4 Dimensions and Weights

4.1 Classic E.O.S. Type 5270/100



Dimensions

| | Length mm (inch) | Width mm (inch) | Height mm (inch) |
|--|---------------------|-----------------|---------------------|
| incl. packing box | 1200 (47.28) | 800 (31.52) | 1460 (57.52) |
| without packing material (with feed table and chute) | 1270 (50.03) | 710 (27.97) | 1130 (44.52) |

Weight

| | Weight approx. kg (lbs) |
|--------------------------|-------------------------|
| with packing material | 200 (441) |
| without packing material | 135 (297) |
| with full tanks | 165 (364) |

4.2 Classic E.O.S. CL Type 5270/105



Dimensions

| | Length mm (inch) | Width mm (inch) | Height mm (inch) |
|--|---------------------|-----------------|---------------------|
| incl. packing box | 1200 (47.28) | 800 (31.52) | 1460 (57.52) |
| without packing material (with docking unit and chute) | 1070 (42.15) | 710 (27.97) | 1130 (44.52) |

Weight

| | Weight approx. kg (lbs) |
|--------------------------|-------------------------|
| with packing material | 200 (441) |
| without packing material | 135 (297) |
| with full tanks | 165 (364) |

5 Machine Standards and Directives

5.1 Safety

Europe

EN 60950 / A11 1997 "Safety of Information Technology Equipment"
(identical with IEC 950: 1992 and VDE 0805/ 11. 97)

USA

UL 1950 3. July 1995 "Safety of Information Technology Equipment,
Including Electrical Business Equipment"

Canada

CSA 22.2 No. 950 - 95 "Safety of Information Technology Equipment,
Including Electrical Business Equipment"

5.2 Radio interference suppression

Europe

In compliance with EN 50081-1: 1992 "Generic Standard for Emission
Requirements", (identical with VDE 0839, Part 81-1/ 03. 93)

EN 55011 1998, Class B "Radio Disturbance Characteristics of Medical
Equipment" (corresponds to VDE 0878, Part 22 / 04.98)

For equipment in residential areas, business and commercial areas, and in
doctors' offices.

North-America (USA, Canada)

US-Standard FCC 47 Part 15, Subchapter B, Class A / Edition 8/ 1976
Equipment considered "Non-Household Appliances"

5.3 Electromagnetic compatibility

EMVG and EG Regulation 89 / 336 / EEC

EN 50082-1: 1997

EN 61000-3-2 "Limit Values for Harmonic Emissions"

EN 61000-3-3 "Limit Values for Flicker"

5.4

Certificates and guidelines

| | |
|-----------------------------|-------------------------------|
| CE Medical Device Directive | 93/42 EEC |
| TÜV Product Service Mark | "Design tested and monitored" |
| UL Approbation | E 477 50 (M) |
| C-UL Approbation | E 477 50 (M) |

| | |
|--|---------------------------------------|
| "Technical directives for drinking water installations, protection against reflux" | DIN 1988, Part 4/ 1988 / EN 1717:2001 |
|--|---------------------------------------|

| | |
|---|--|
| General conditions and administrative regulations for minimum requirements on the disposal of waste water into public waters, dated 31.01.1994 (Germany) | Appendix 53 – Photographic Processes (silver halide photography) |
|---|--|

| | |
|---|--|
| Ministre de l'environnement (France) | Rubrique No. 2950 Maximum water consumption for - single-layer emulsions must not exceed a maximum of 15l/m ² * - double-sided emulsions must not exceed a maximum of 30l/m ² * * activated in the program <Service Settings / Replenishment / Wat. Repl. Value> |
|---|--|

Section 2

describes the controls and the connectors of the machine:

- Position and function of the controls
- Layout of the connectors and their modalities

Chapter 2

Contents

| | | |
|------------|--|----------|
| 1 | Control panel | 1 |
| 2 | Switches..... | 2 |
| 2.1 | Machine switches | 2 |
| 2.2 | Safety switches..... | 3 |
| 3 | Installation Connections..... | 4 |
| 3.1 | Installation through the front panel (only for Classic E.O.S. Type 5270/100)..... | 4 |
| 3.2 | Installation through the bottom..... | 5 |
| 3.2.1 | Classic E.O.S. (5270/100)..... | 5 |
| 3.2.2 | Classic E.O.S. CL (5270/105)..... | 6 |

1

Control panel

Classic E.O.S. Type 5270/100

Classic E.O.S. CL Type 5270/105

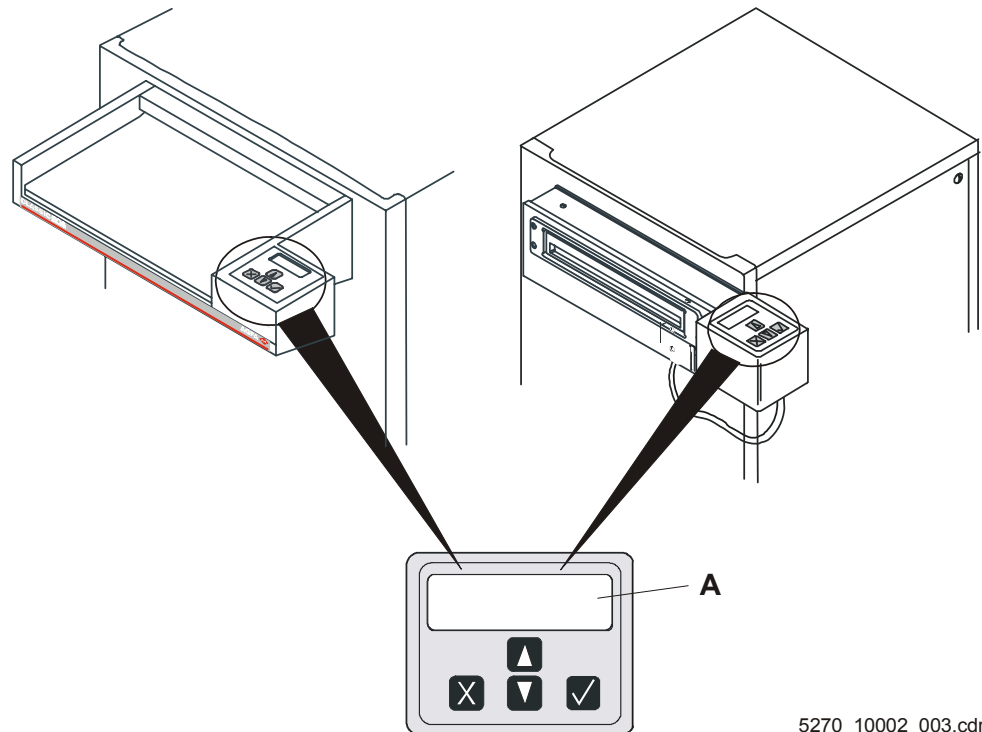


Figure 1

5270_10002_003.cdr

- (A) LCD
Display window consisting of 2 lines with 16 characters each.
- Back key
Press this key to exit a dialog or a menu. If you press this key in an input window any modifications made in this window will be canceled and reset to the initial values.
- Selection / Scroll keys
Use these keys to scroll through the options in the menus or to change values in input windows.
- Enter / Confirmation key
Use this key to show the options in a menu or to confirm a dialog. A confirmed dialog opens the corresponding input window. Entered data is confirmed and accepted.

2 Switches

2.1 Machine switches

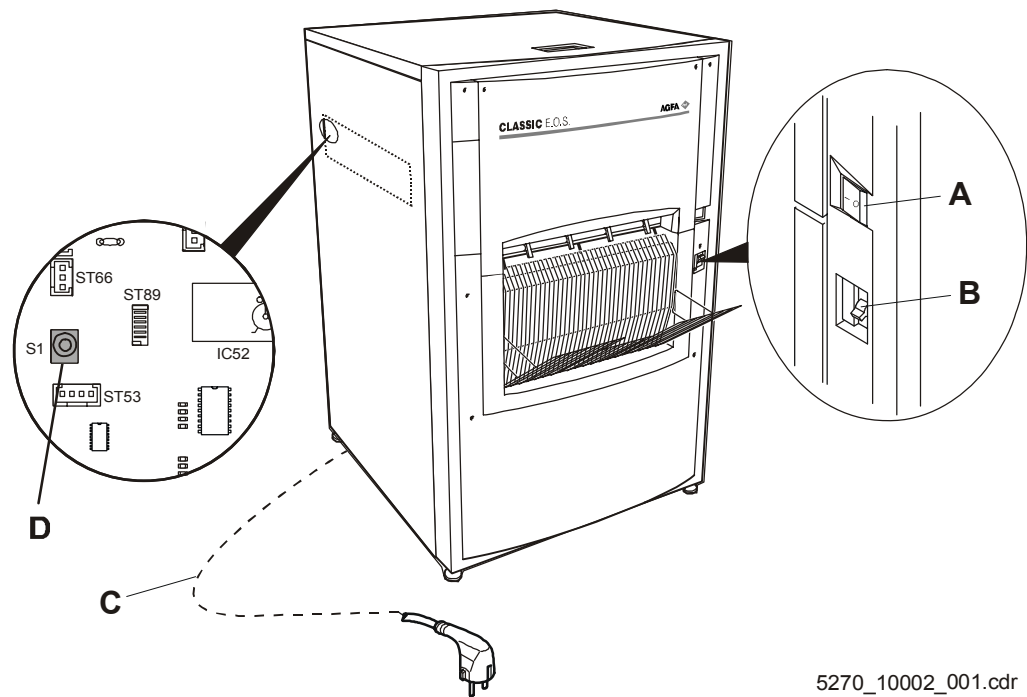


Figure 2

5270_10002_001.cdr

- (A) Main switch film processor
- (B) Ground fault interrupter (GFI switch)
- (C) Mains cable (VDE)
- (D) Reset key PCB1
CM+952709450_ (F8.5270.7890._)

2.2

Safety switches

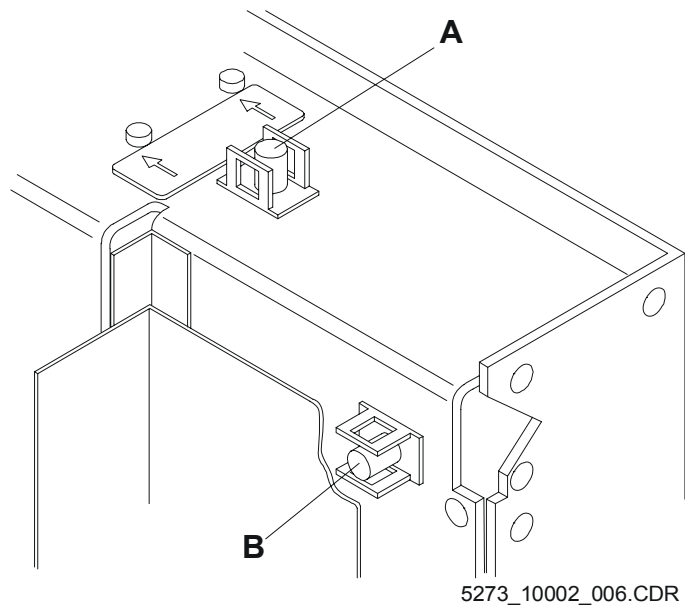


Figure 3

(A) 0SW2 Safety switch for machine cover

(B) 0SW3 Safety switch for dryer

The machine has two safety switches, which interrupt the circuit when the dryer is opened or the machine cover is removed.



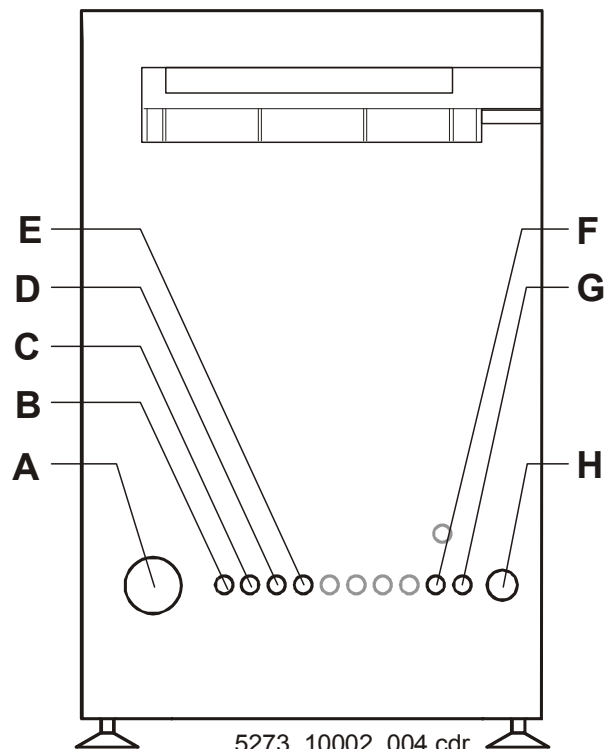
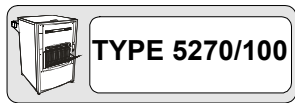
Even with interrupted safety switches 0SW2 (A) and/or 0SW3 (B), and the main switch 0SW1 in off position, there is still voltage applied on the following components as long as the power cord is plugged in:

Ground fault interrupter 0FI

Mains switch 0SW1

3 Installation Connections

3.1 Installation through the front panel (only for Classic E.O.S. Type 5270/100)



5273_10002_004.cdr

Figure 4

- (A) Exhaust connection
- (B) Developer overflow / drain (DEV)
- (C) Fixer overflow / drain (FIX)
- (D) Water overflow / drain (WAT)
- (E) Tank safety overflow (OVERFLOW)
- (F) Developer supply (DEV)
- (G) Fixer 2 supply (FIX)
- (H) Water supply (WAT)

3.2 Installation through the bottom

3.2.1 Classic E.O.S. (5270/100)

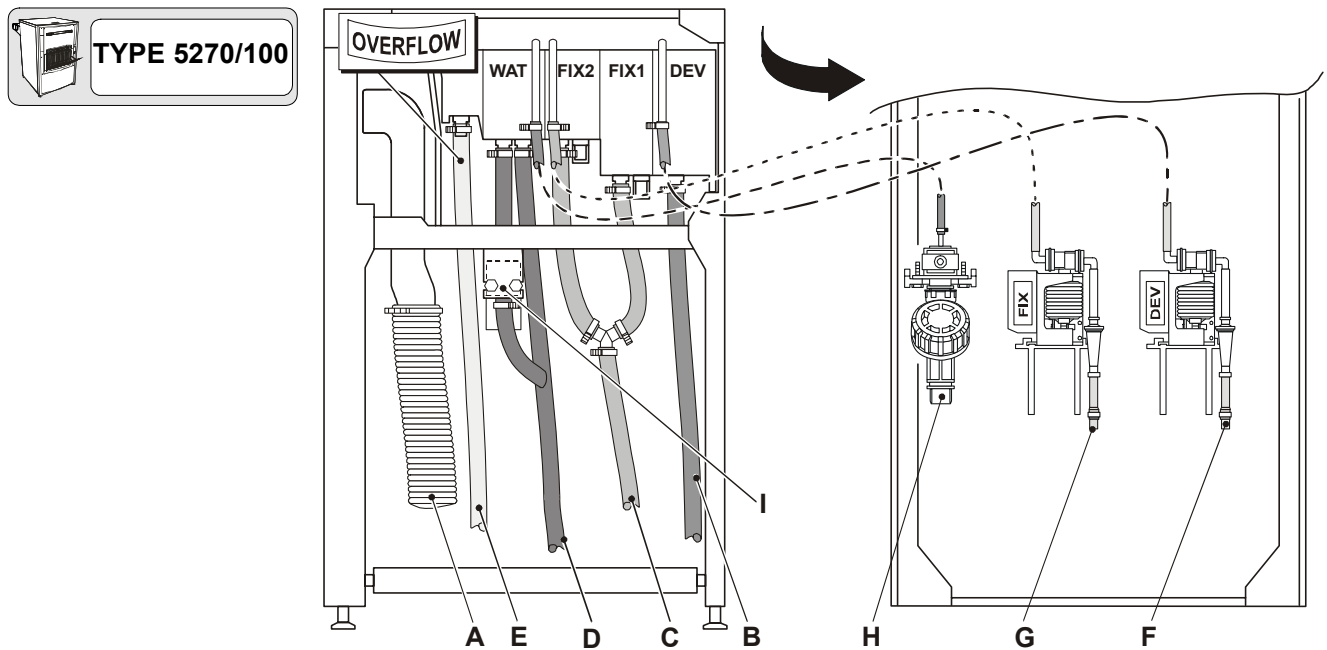
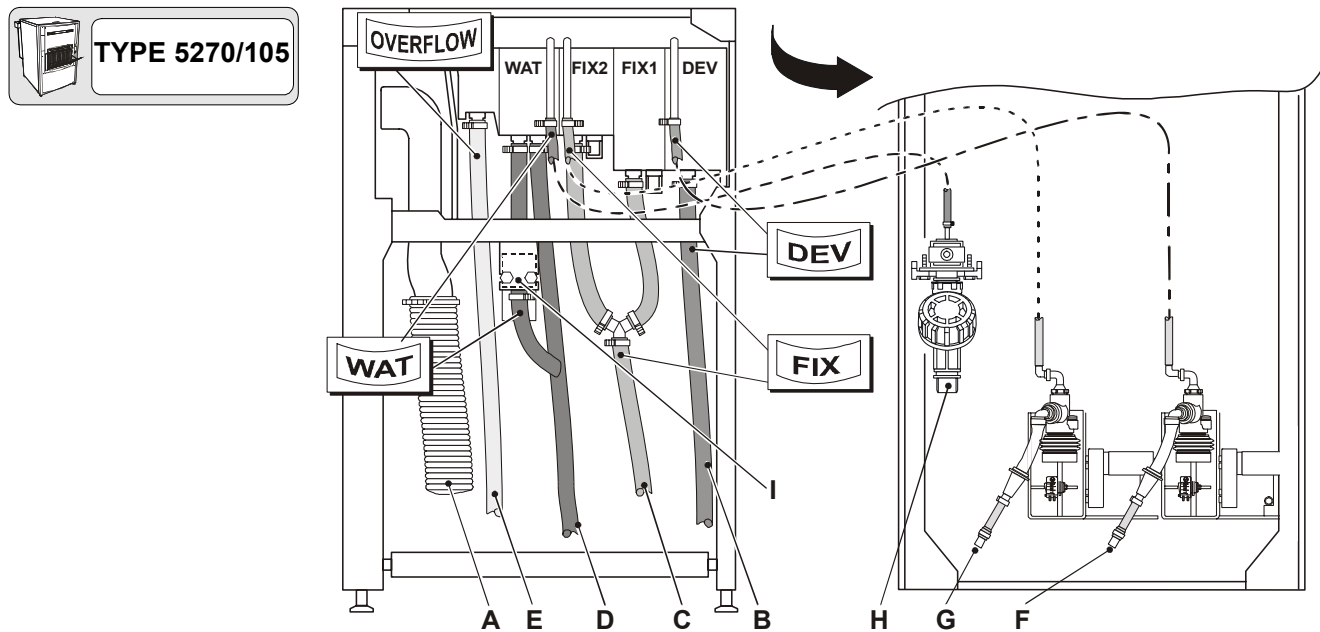


Figure 5

- (A) Exhaust connection
- (B) Developer overflow / drain (DEV)
- (C) Fixer overflow / drain (FIX)
- (D) Water overflow / drain (WAT)
- (E) Tank safety overflow (OVERFLOW)
- (F) Developer supply (DEV)
- (G) Fixer 2 supply (FIX)
- (H) Solenoid valve (and filter) water supply
- (I) Solenoid valve water drain (anti-algae)

3.2.2

Classic E.O.S. CL (5270/105)



5270_10002_004.CDR

Figure 6

- (A) Exhaust connection
- (B) Developer overflow / drain (DEV)
- (C) Fixer overflow / drain (FIX)
- (D) Water overflow / drain (WAT)
- (E) Tank safety overflow (OVERFLOW)
- (F) Developer supply (DEV)
- (G) Fixer 2 supply (FIX)
- (H) Solenoid valve (and filter) water supply
- (I) Solenoid valve water drain (anti-algae)

Section 3

describes the exact routines necessary to start the machine operation.
Before putting the machine in operation you should be familiar with the information of section 2 (controls and connectors).

Chapter 3

Contents

| | | |
|------------|--|-----------|
| 1 | Notes on the Installation and Startup Procedures | 1 |
| 2 | Removal of Transport Protections | 2 |
| 3 | Installation | 3 |
| 3.1 | Height coarse adjustment..... | 3 |
| 3.2 | Height fine adjustment..... | 4 |
| 4 | Power Cable Adaptation | 5 |
| 5 | Daylight / Darkroom Installation (only Classic E.O.S. Type 5270/100) | 6 |
| 5.1 | Machine in the daylight, film feed in the darkroom, light seal at the darkroom feed table | 6 |
| 5.1.1 | Installation at the wall opening | 6 |
| 5.1.2 | Installation with light tight wall..... | 7 |
| 5.2 | Machine in the darkroom, film exit in the daylight, light seal at the dryer with light tight wall | 8 |
| 5.2.1 | Installation at the wall opening with light tight wall | 8 |
| 5.2.2 | Light tight wall | 9 |
| 6 | Supply and Disposal Connections | 10 |
| 6.1 | Installation diagram..... | 10 |
| 6.2 | Overview of supply and disposal..... | 11 |
| 6.2.1 | Classic E.O.S. (5270/100)..... | 11 |
| 6.2.2 | Classic E.O.S. CL (5270/105)..... | 12 |
| 6.3 | Supply and disposal hoses | 13 |
| 6.3.1 | Hoses inside the machine | 13 |
| 6.3.2 | Hoses outside the machine..... | 13 |
| 6.4 | Supply and disposal through the lower front panel (only Classic E.O.S. Type 5270/100) | 14 |
| 6.4.1 | Instructions for breaking out the openings | 14 |
| 6.4.2 | Required openings for standard installations | 14 |
| 6.4.3 | Installing the exhaust connection | 15 |
| 6.4.4 | Installing the developer / fixer supply hoses | 16 |
| 6.4.5 | Installing the disposal hoses | 18 |
| 6.5 | Supply and disposal through the floor | 19 |
| 6.5.1 | Installing the exhaust connection | 19 |
| 6.5.2 | Installing supply hoses | 21 |
| 6.5.3 | Installing the disposal hoses | 24 |

| | | |
|------------|---|-----------|
| 7 | Connecting the Level Sensors | 25 |
| 7.1 | Replenisher tanks..... | 25 |
| 7.1.1 | Connect the level sensors of the replenisher tanks | 25 |
| 7.1.2 | Set the code for the replenisher tank level connection | 25 |
| 7.2 | Mixer | 26 |
| 7.2.1 | Connecting the Mixer communication cable | 26 |
| 7.2.2 | Set the code of the mixer communication | 26 |
| 7.3 | Disposal tanks | 27 |
| 7.3.1 | Connect the level sensors of the disposal tanks | 27 |
| 7.3.2 | Set the code for the disposal tank level sensors | 27 |
| 8 | Adjusting Volume, Brightness, and Contrast on the Control Board PCB1 | 28 |
| 9 | Starting Operation | 29 |
| 9.1 | Preparing the startup procedure..... | 29 |
| 9.2 | Adapting the mains supply..... | 29 |
| 9.3 | Checking the function of the GFI switch 0FI..... | 30 |
| 9.4 | Filling the developer and fixer tanks | 31 |
| 9.4.1 | Manual filling (in Type 5270/100 and Type 5270/105) | 31 |
| 9.4.2 | Automatic filling with the AUTOFILL function (only in Type 5270/105)..... | 32 |
| 9.5 | Switching on the machine | 32 |
| 9.6 | Calibrating the replenishment rate of developer and fixer upon first startup | 33 |
| 9.7 | Reset after switching on the machine | 37 |
| 9.8 | BASEINIT..... | 38 |
| 9.8.1 | Only execute a BASEINIT in case of:..... | 38 |
| 9.8.2 | Initiate a BASEINIT:..... | 38 |
| 9.9 | System settings | 39 |
| 9.9.1 | Setting the software switches in the SERVICE program | 39 |
| 9.9.2 | Setting the process parameters on the control panel | 39 |
| 9.9.3 | Access to the SERVICE program..... | 41 |
| 9.9.4 | Setting date and time..... | 41 |
| 9.9.5 | Setting the service intervals in the SERVICE program..... | 42 |
| 9.9.6 | Executing a <Teach In> in the SERVICE program | 43 |
| 9.9.7 | Calibrating the Developer Temperature (CAL) | 45 |
| 9.9.8 | Resetting the temporary infocounters in the SERVICE program..... | 46 |
| 9.9.9 | Display all <Service Settings> in the SERVICE program with <Quick Display>..... | 47 |
| 9.9.10 | Setting the customer specific settings in the SERVICE program <Service Settings>..... | 48 |
| 9.9.11 | DEFAULT settings ex factory / after BASEINIT | 56 |
| 9.9.12 | Processes..... | 56 |
| 9.9.13 | Process data..... | 57 |
| 9.9.14 | Application dependent process parameter | 57 |

1

Notes on the Installation and Startup Procedures

The manufacturer tested this machine with chemicals and film material. Therefore any possible traces of chemicals do not indicate a used machine but they are the proof of a function-tested and perfect machine.

The sequence of listed installation steps depends on the following parameters:

- Size of the installation room
- Type of installation:
Daylight / darkroom installation
Light seal feed table / dryer directly against installation wall or light-tight wall
- Supply / disposal connections through the lower front panel or below the machine
- Machine standing free in the room or with the left hand machine side at a distance from the wall of at least 15 cm (5.91 inch)

Please go through these procedures and arrange a sequence required for your installation.

The sequence described below corresponds to a standard installation with the following parameters:

- Film feed in the darkroom, machine in the daylight
Light seal at the film feed table without / with light tight wall
- Film feed / machine in the darkroom, film exit in the daylight
Light seal with light-tight wall behind the dryer / film exit
- Installation connections through the lower front panel (below the film feed table)
- Installation connections through the floor
- Machine with the left hand machine side at a distance from the wall of at least 15 cm (5.91 inch)

2

Removal of Transport Protections

- (1) Undo 2 screws on the dryer panels and remove the dryer panels, open the dryer flap.
- (2) Remove the transport protection from the dryer.
- (3) Remove the transport protection from the film transport flap (only in Type 5270/105).
- (4) Close the dryer flap and dryer panels, tighten the screws of the dryer panels.

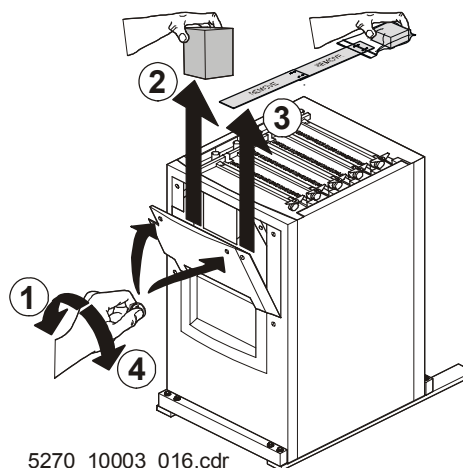


Figure 1

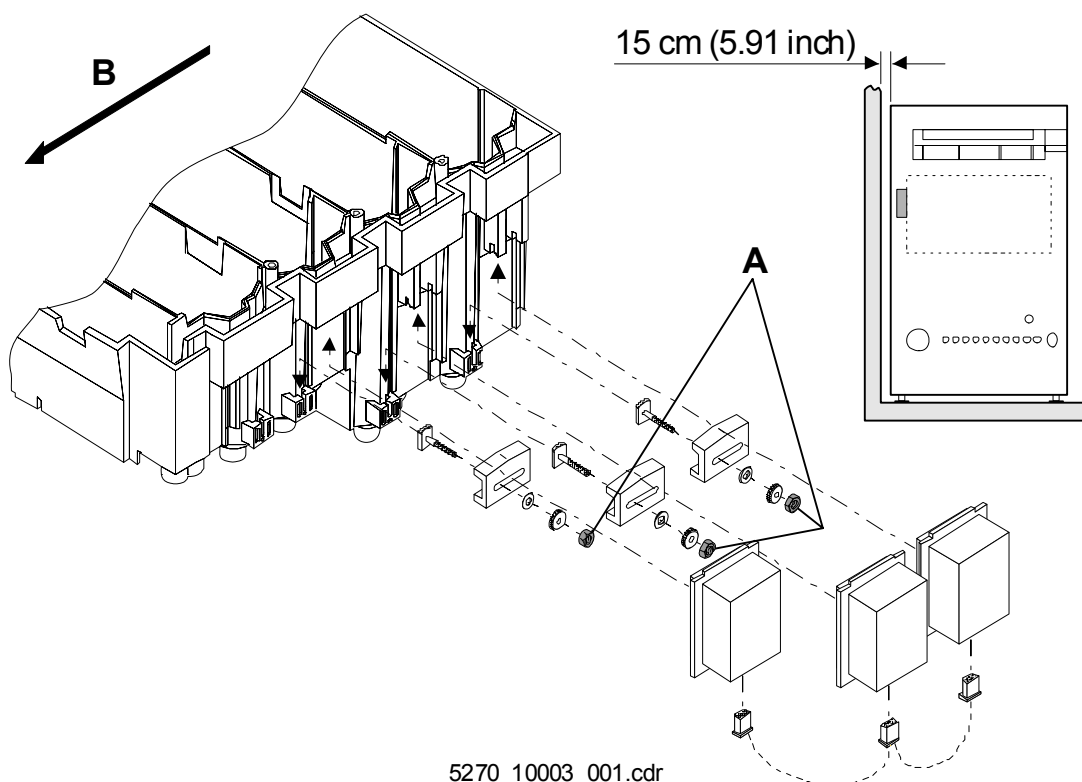


Figure 2

- (A) Lock nuts
(B) Film transport direction

- If a machine is installed with the left hand side only 15 cm (5.91 inch) from the wall, the lock nuts (A) must be removed during installation to make the maintenance easier.

3

Installation



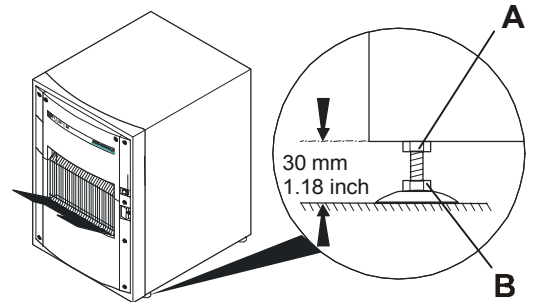
Wrench (Ø 17 mm)

3.1

Height coarse adjustment



- Slacken the lock nuts (A).
- Adjust the hex nuts (B) to a height of 30 mm (1.18 inch).
Clockwise = higher
Counterclockwise = lower
- Adjust the height of the adjustable machine feet to level the machine.



5273_10003_002.cdr

Figure 3

3.2 Height fine adjustment

The fine adjustment should only be made when the machine is at its final installation site.



A poorly adjusted machine installation may result in film processing errors!

Measure in film transport direction:

- Remove the machine cover.
- Remove the crossovers above the racks.
- Place a spirit level (A) on the upper tie rod of the fixer rack (3) and the water rack (4). Adjust the height of the rear and front feet until the machine is level in transport direction.

Measure across film transport direction:

- Place a second spirit level (B) on the upper tie rods of the developer rack (1) and then on the tie rods of the water rack (4).
- Adjust the foot height left and right.
- Readjust the height of the rear and front feet.
- Check the adjustment in and across the film transport direction, and readjust if necessary.

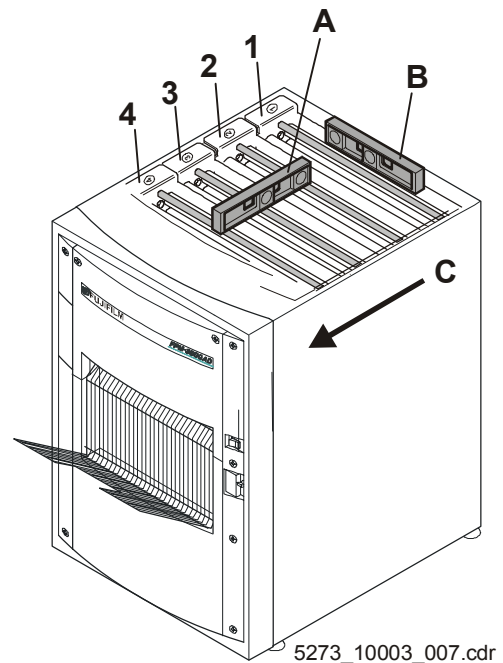


Figure 4

- (A/B) Spirit level
- (C) Film transport direction
- (1) Developer rack
- (2) Fixer rack1
- (3) Fixer rack2
- (4) Water rack

4

Power Cable Adaptation



Ex-factory the machine configuration includes a VDE cable.

If there are only UL/CSA connections available the VDE power cable must be replaced by the UL/CSA cable enclosed in the accessory box.



The power cable must only be exchanged when the film processor has no power supply. The installed power cable must not be plugged into an outlet!

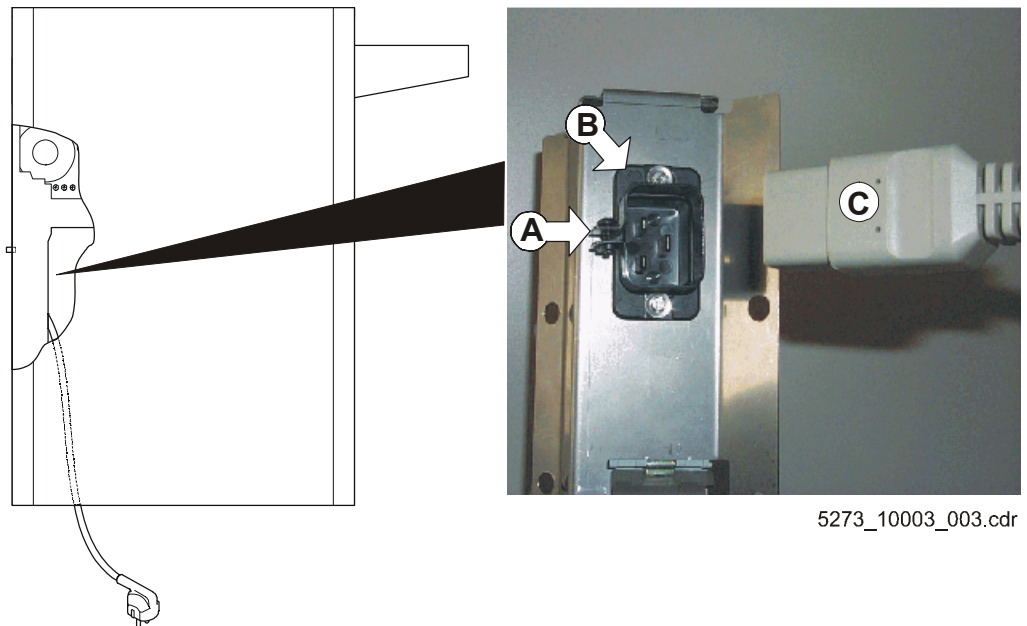


Figure 5

- Replace the VDE power cable by the UL/CSA cable.



- **Make sure** to tighten clamping screw (A) if plug (B) is connected in outlet (C).

5 Daylight / Darkroom Installation (only Classic E.O.S. Type 5270/100)



For installation of the Classic E.O.S CL Type 5270/105 please refer to the installation instructions in Chapter 9: Accessories and Options.

5.1 Machine in the daylight, film feed in the darkroom, light seal at the darkroom feed table

5.1.1 Installation at the wall opening



- ① Film feed
- ② Film output (wire chute)
- ③ A 60° chamfer must be provided on the wall opening
- ④ Wall
- ⑤ Wall base
- ⑥ Light seal (foam rubber – by the meter)
Order no. CM+0000014259

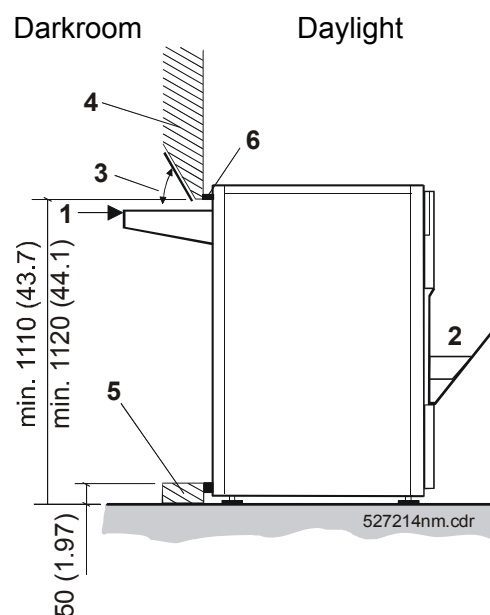


Figure 6

Dimensions in **mm (inch)**

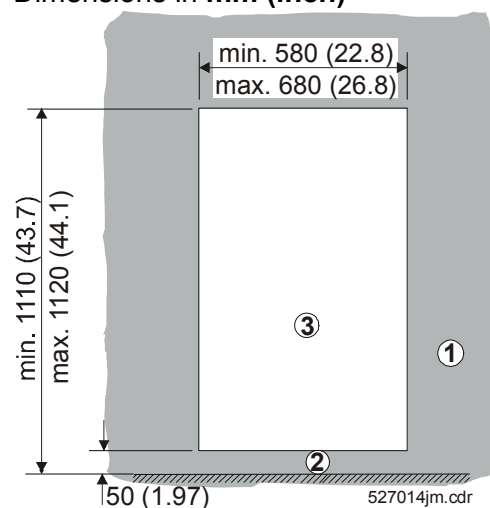


Figure 7

Dimensions in **mm (inch)**

Wall opening:

- ① Wall
- ② Wall base
- ③ Wall opening

5.1.2

Installation with light tight wall



- ① Film feed
- ② A 60° chamfer must be provided on the wall opening.
- ③ Wall
- ④ Light tight wall
- ⑤ Film output (wire chute)
- ⑥ Wall base
- ⑦ Light seal (foam rubber – by the meter)
Order no. CM+0000014259

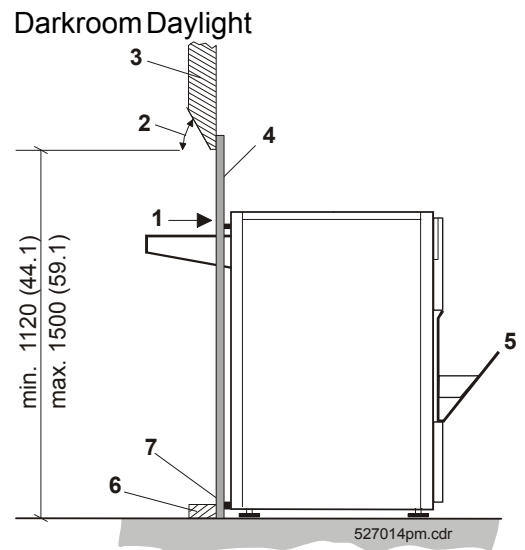


Figure 8

Dimensions in **mm (inch)**

Wall opening

- ① Wall
- ② Wall overlap
- ③ Wooden board, 20 mm (0.79 inch), with opening

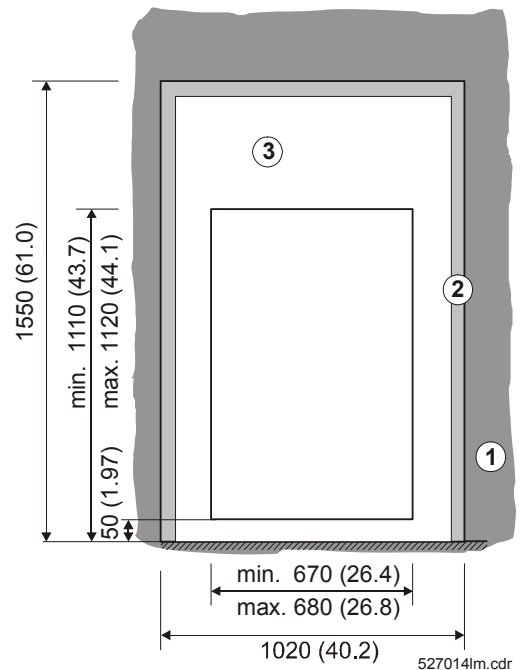


Figure 9

Dimensions in **mm (inch)**

See Chapter 3, Section 5.2.2 Light tight wall

5.2 Machine in the darkroom, film exit in the daylight, light seal at the dryer with light tight wall

5.2.1 Installation at the wall opening with light tight wall



- ① Film feed
- ② Wall
- ③ A 60° chamfer must be provided on the wall opening.
- ④ Light tight wall
- ⑤ Film output (wire chute)
- ⑥ Light seal (foam rubber – by the meter)
Order no. CM+0000014259
- ⑦ Wall base

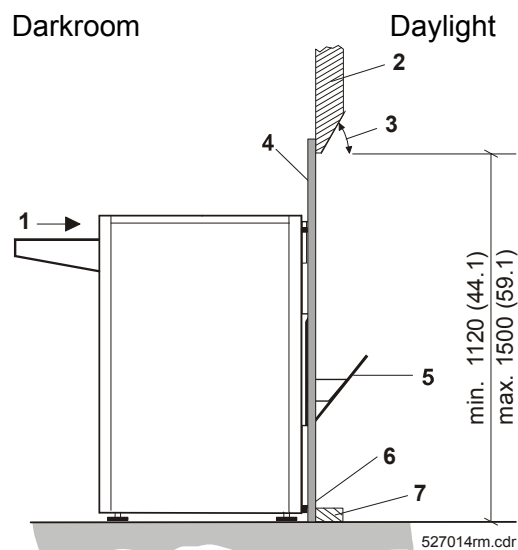


Figure 10

Dimensions in mm (inch)

Wall opening

- ① Wall
- ② Wall overlap / light tight wall overlapping by at least 50 mm (1.97 inch) on all sides
- ③ Wooden board, 20 mm (0.79 inch), with opening

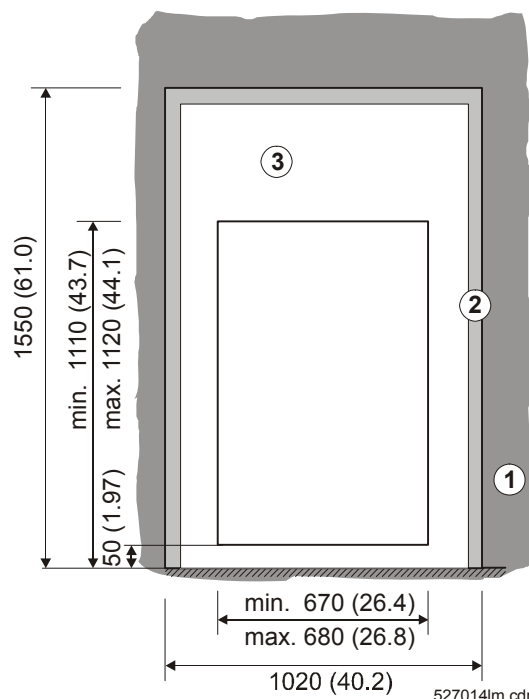


Figure 11

Dimensions in mm (inch)



See Chapter 3, Section 5.2.2 Light tight wall

5.2.2

Light tight wall

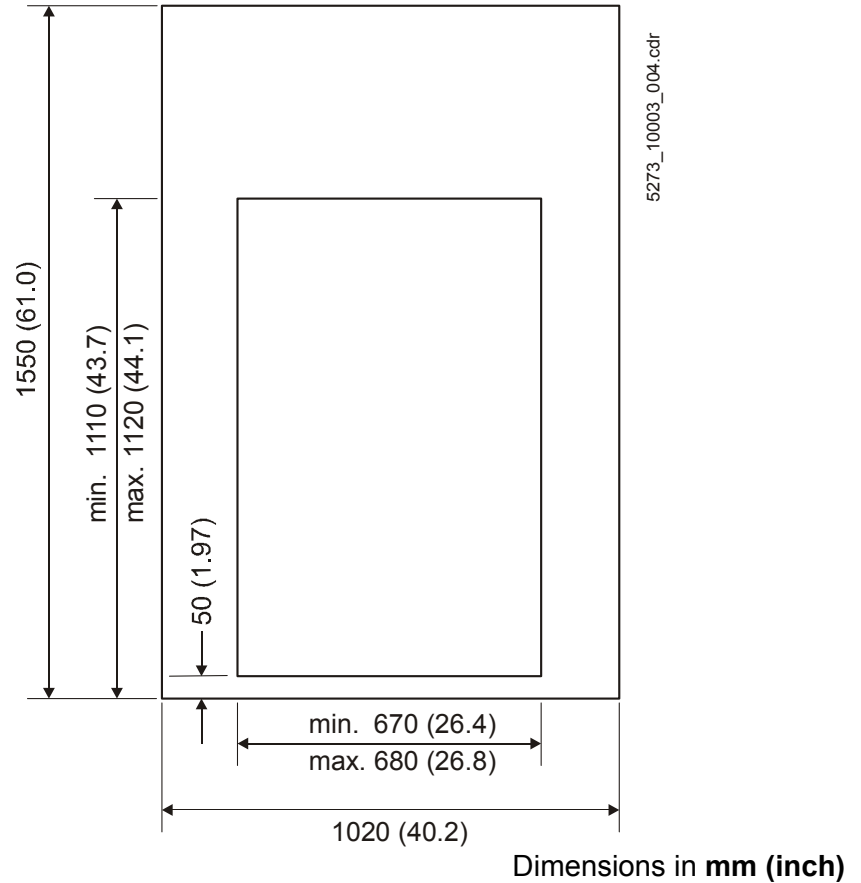


Figure 12

Coverage of a wall opening of up to 1500 mm x 920 mm (57.09 inch x 36.22 inch) is possible.
An overlap of 50 mm (1.97 inch) must be guaranteed on all sides.



The manufacturer does not supply the light tight wall (wooden board) required for the installation of a film processor!

6 Supply and Disposal Connections

6.1 Installation diagram

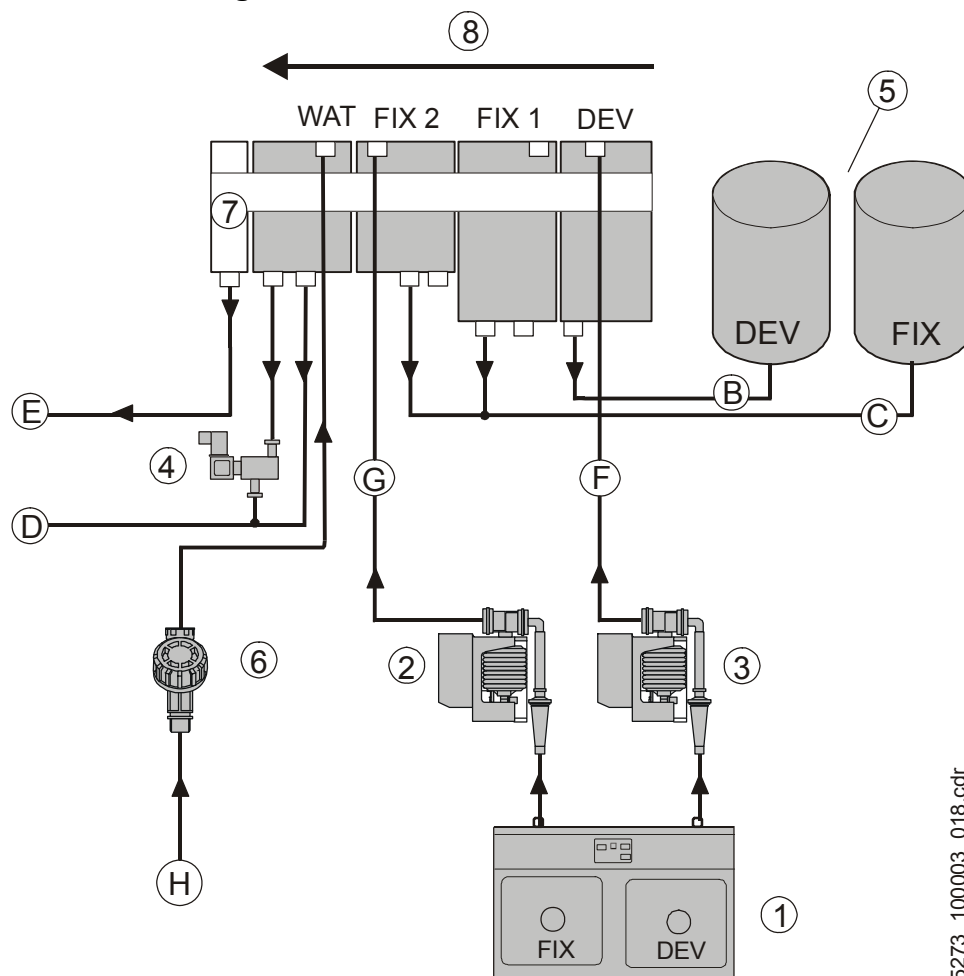
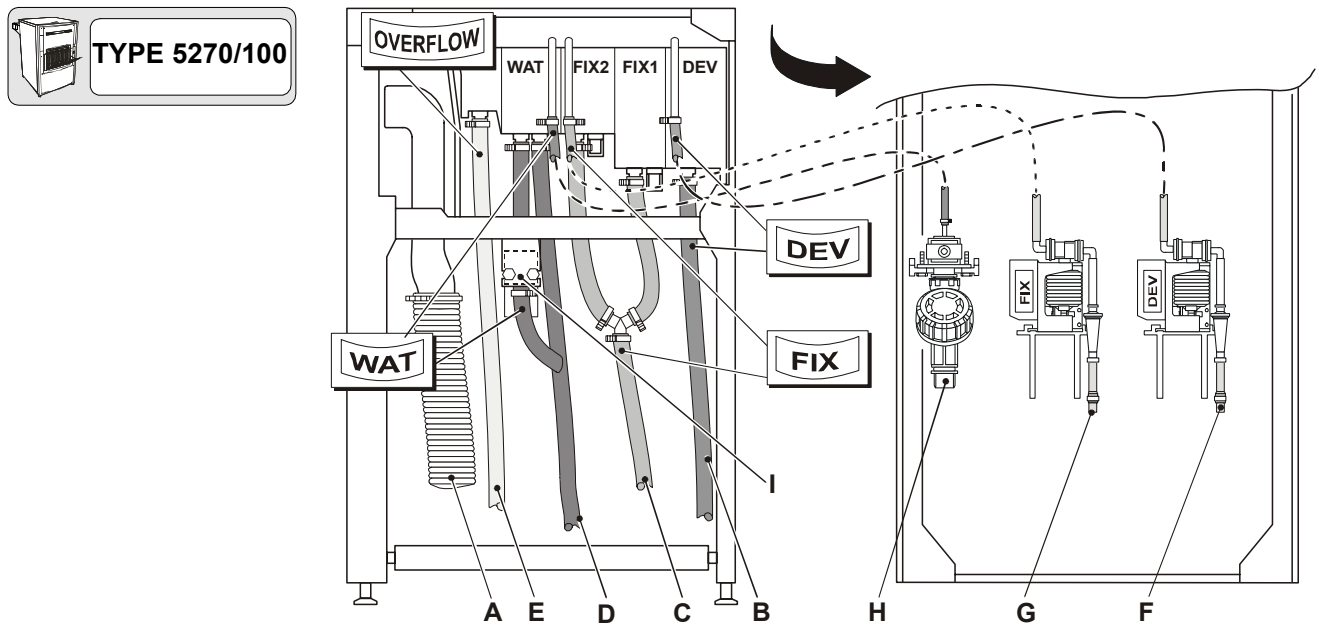


Figure 13

5273_100003_018.cdr

- | | |
|--------------------------------------|---|
| (D) Water overflow / drain (WAT) | (1) Mixer |
| (E) Tank safety overflow (OVERFLOW) | (2) Fixer replenishment pump |
| | (3) Developer replenishment pump |
| (C) Fixer overflow / drain (FIX) | (4) Solenoid valve water drain |
| (B) Developer overflow / drain (DEV) | (5) Individual disposal tanks or centralized disposal |
| (G) Fixer 2 supply (FIX) | (6) Solenoid water supply (anti-algae) |
| (F) Developer supply (DEV) | (7) Overflow tray |
| (H) Water supply (WAT) | (8) Film transport direction |

The connections of supply and disposal hoses may be at the bottom (through the floor) or in the front (through the front panel – only for Type 5270/100).

6.2**Overview of supply and disposal****6.2.1****Classic E.O.S. (5270/100)**

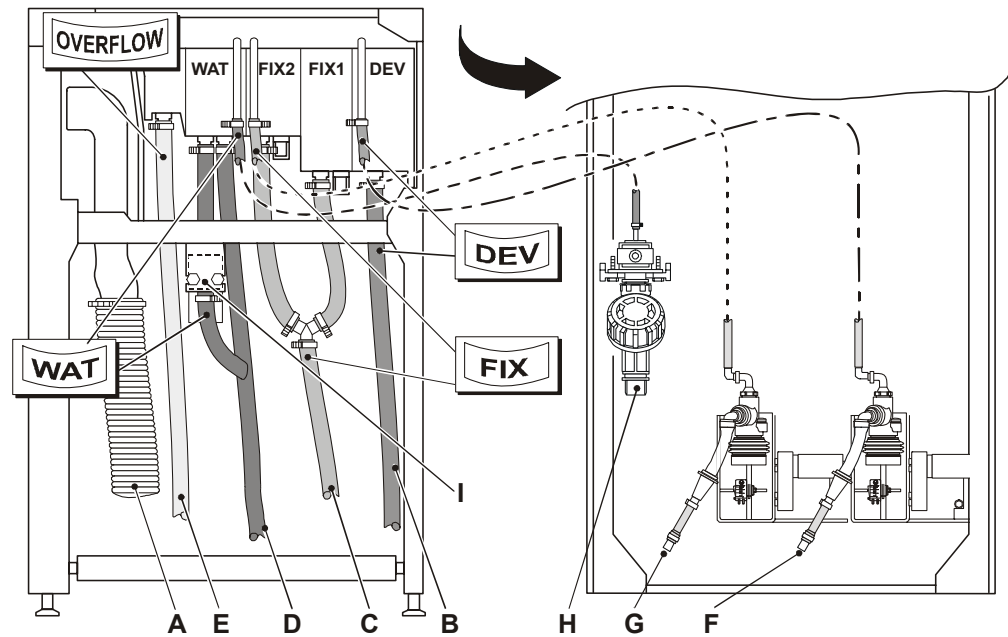
5273_10002_005.CDR

Figure 14

- (A) Exhaust connection
- (B) Developer overflow / drain (DEV)
- (C) Fixer overflow / drain (FIX)
- (D) Water overflow / drain (WAT)
- (E) Tank safety overflow (OVERFLOW)
- (F) Developer supply (DEV)
- (G) Fixer 2 supply (FIX)
- (H) Solenoid valve (and filter) water drain (WAT)
- (I) Solenoid water supply (anti-algae)

6.2.2

Classic E.O.S. CL (5270/105)



5270_10002_004.CDR

Figure 15

- (A) Exhaust connection
- (B) Developer overflow / drain (DEV)
- (C) Fixer overflow / drain (FIX)
- (D) Water overflow / drain (WAT)
- (E) Tank safety overflow (OVERFLOW)
- (F) Developer supply (DEV)
- (G) Fixer 2 supply (FIX)
- (H) Solenoid valve (and filter) water drain (WAT)
- (I) Solenoid water supply (anti-algae)

6.3 Supply and disposal hoses

6.3.1 Hoses inside the machine

Internal hoses are pre-installed.



The supply and disposal hoses for developer, fixer, water, and safety overflow in the machine are marked by tapes:

DEV = developer
FIX = fixer

WAT = water
OVERFLOW = safety overflow

Tapes to be wrapped around external hoses are included in the accessory box.

6.3.2 Hoses outside the machine

External hoses can be ordered by the meter.



For the installation of external hoses only use fiber-reinforced hoses!

The following hoses are to be used for the supply connections:

| Supply connection | Color | Dimensions (mm / inch) | Order number |
|-------------------|------------|--------------------------------------|---------------|
| Developer | red (DEV) | 10x3 / 0.39x0.12 fiber-reinforced | CM+0000064082 |
| Fixer | blue (FIX) | 10x3 / 0.39x0.12 fiber-reinforced | CM+0000064083 |

The following hoses are to be used for the disposal connections:

| Disposal connection | Color | Dimensions (mm / inch) | Order number |
|--------------------------|----------------------|--------------------------------------|---------------|
| Developer | red (DEV) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000064133 |
| Fixer | blue (FIX) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000064134 |
| Water safety overflow | transparent (WAT) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000007620 |

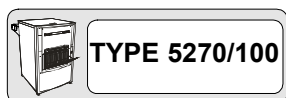
The accessory box includes an approx. 50 cm (19.69 inch) long PAP hose **for the exhaust connection**.

The PAP hose (Ø 100 mm / Ø 3.94 inch) can be ordered by the meter:

Order number CM+0000064117

6.4 Supply and disposal through the lower front panel (only Classic E.O.S. Type 5270/100)

6.4.1 Instructions for breaking out the openings



It is **not** necessary to remove the front panel in order to break out the openings.

- Mark the recesses to be broken out with a felt-tip marker.
- The recessed material can be broken out with a screwdriver applied in the groove at the outside and a blow with the hammer.

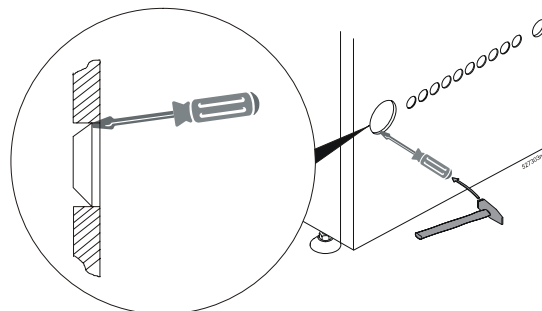
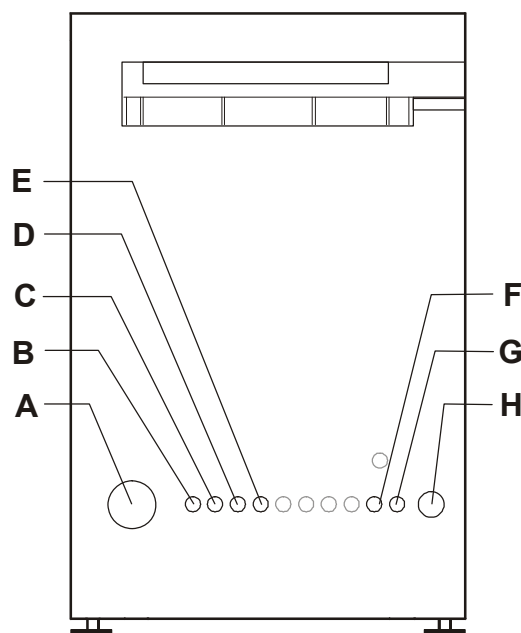


Figure 16

6.4.2 Required openings for standard installations



- (A) Exhaust connection
- (B) Developer overflow / drain
- (C) Fixer overflow / drain
- (D) Water overflow / drain
- (E) Safety overflow, tanks
- (F) Developer supply
- (G) Fixer 2 supply
- (H) Water supply



5273_10002_004.cdr

Figure 17

6.4.3

Installing the exhaust connection



The machine internal exhaust must always be guided out of the machine.



- The film processor has an integrated exhaust duct (A). Crossover (B) and the flexible exhaust hose (C) (Ø 100 mm / 3.94 inch) are pre-mounted and included in the accessory box.
- Exhaust connection: Ø 100 mm (3.94 inch)
- Max. length of the exhaust hose: 5 m (196.85 inch) (if this length is exceeded install an additional fan!)
- Exhaust volume: min. 50 m³/h
max. 100 m³/h

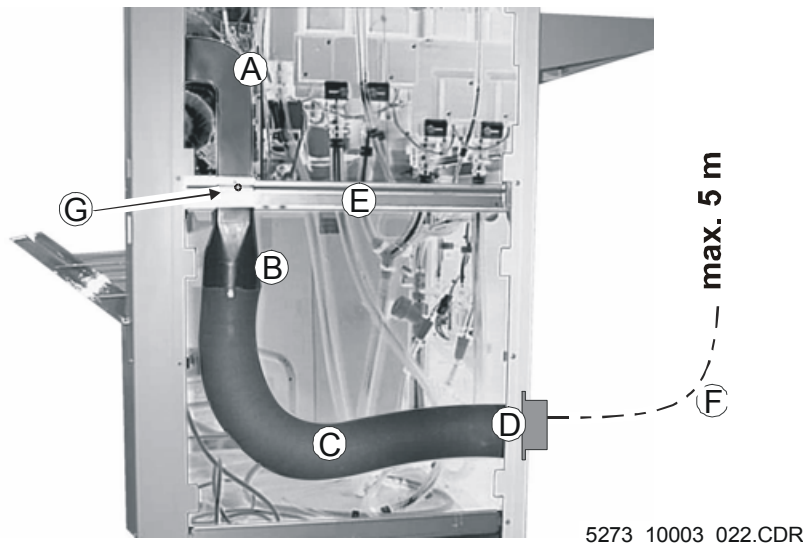


Figure 18

- | | |
|----------------------------------|---|
| (A) Exhaust duct | (F) Exhaust duct to the room exhaust (PAP hose) |
| (B) Crossover | (G) Mounting screw for crossover (B) |
| (C) Flexible exhaust hose inside | |
| (D) Exhaust connection stub | |
| (E) Frame | |

- Break out the recess for the exhaust connection (Figure 17).
- Screw the exhaust connection stub (D) to the front panel using the 3 Phillips screws included in the accessory box.
- Loosen the mounting screw (G) located between the exhaust duct (A) and frame (E).
- Push the crossover section (B) onto the exhaust duct.
- Mount both ducts on the frame with mounting screw (G).
- Push the exhaust hose (C) onto the exhaust connection stub (D) integrated inside the front panel.
- Push exhaust hose (F) on the exhaust connection stub (D) and connect it to the room exhaust.

6.4.4

Installing the developer / fixer supply hoses



Only use **fiber-reinforced** PVC hoses Ø 10x3 mm (0.39x0.12 inch) for the external hose connections (outside the machine)!

Position the hoses **without kinks**!

Installing the developer / fixer supply:

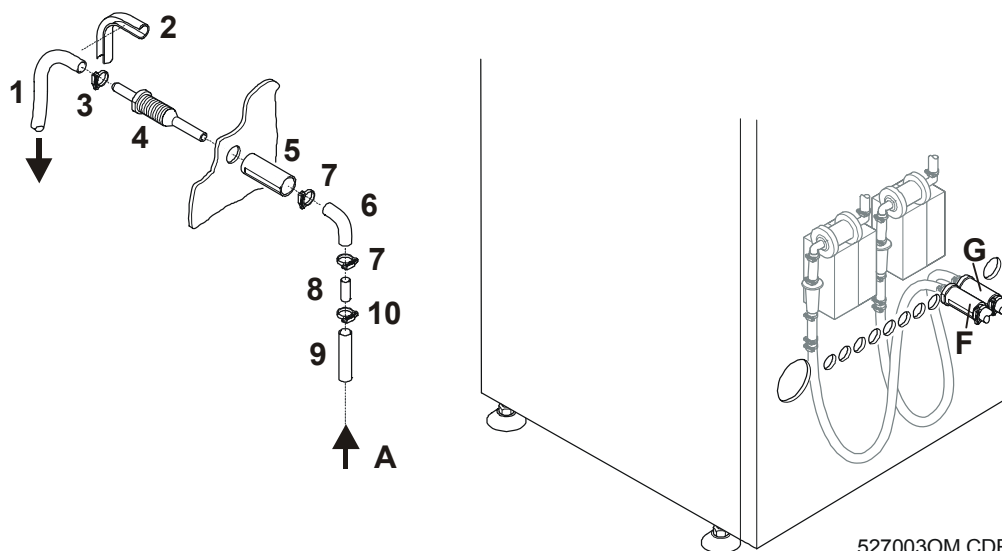


Figure 19

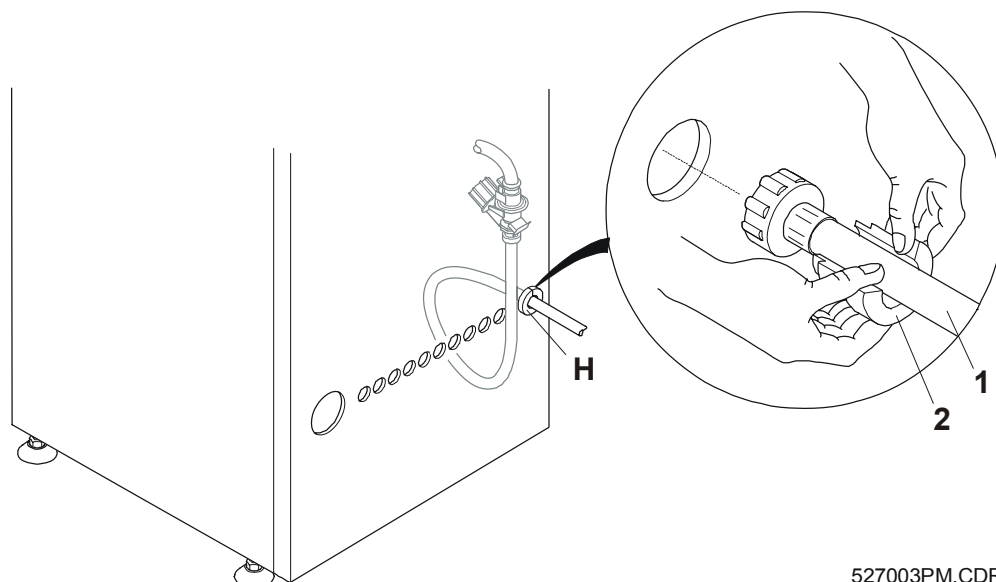
(F) Developer (DEV) (A) Supply direction
(G) Fixer (FIX)

| POS | Designation | Configuration |
|-----|--|--|
| 1 | PVC hose Ø 9x1.5 mm (0.35x0.06 inch) | Pre-installed in the machine |
| 2 | Hose positioning / reinforcement bend-protection | Not included in shipment, can be ordered, CM+7946064580 |
| 3 | Hose clamp | Pre-installed in the machine |
| 4 | Hose connection stub | |
| 5 | Threaded bush | Included in the accessory box |
| 6 | Rubber elbow Ø 10 mm (0.39 inch) | Not included in shipment, can be ordered, CM+9511017970 |
| 7 | Hose clamp | Not included in shipment, can be ordered, CM+7037200210 |
| 8 | Pipe stub Ø 10x1 mm (0.39x0.04 inch) | Not included in shipment, can be ordered, CM+9511017920 |
| 9 | PVC hose Ø 10x3 mm (0.39x0.12 inch) fiber-reinforced Developer: red, Fixer: blue | Not included in the shipment, can be ordered, CM+0000064082 CM+0000064083 |
| 10 | Hose clamp | Not included in shipment, can be ordered, CM+9037200230 |



Install the water pressure hose:

For installation of the water pressure hose refer also to Chapter 14.

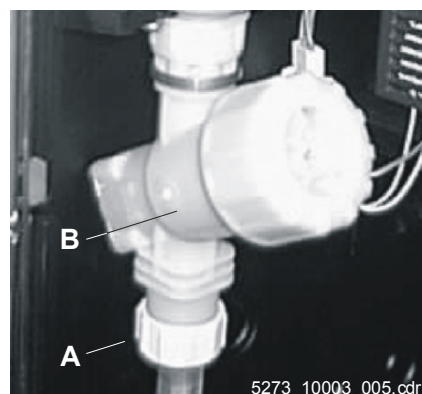


527003PM.CDR

Figure 20

| POS | Designation | Configuration |
|-----|----------------------------------|-------------------------------|
| 1 | Safety pressure hose | Pre-installed |
| 2 | Rubber hose passage / light seal | Included in the accessory box |

- Position the water pressure hose through the front panel (H).
- Connect the union nut (A) on the water pressure hose together with the dirt filter (B).
- Tighten the union nut (A) with a pipe wrench (tightness!).
- Connect the safety pressure hose with the water supply.



5273_100Q3_005.cdr

Figure 21



If a pressure reducer is included in the installation, set the pressure to 2-6 bar.

6.4.5

Installing the disposal hoses



TYPE 5270/100



Only use **fiber-reinforced** PVC hoses Ø 19x4 mm (0.75x0.16 inch) for the external hose connections (outside the machine)!

Position the hoses **without kinks**!

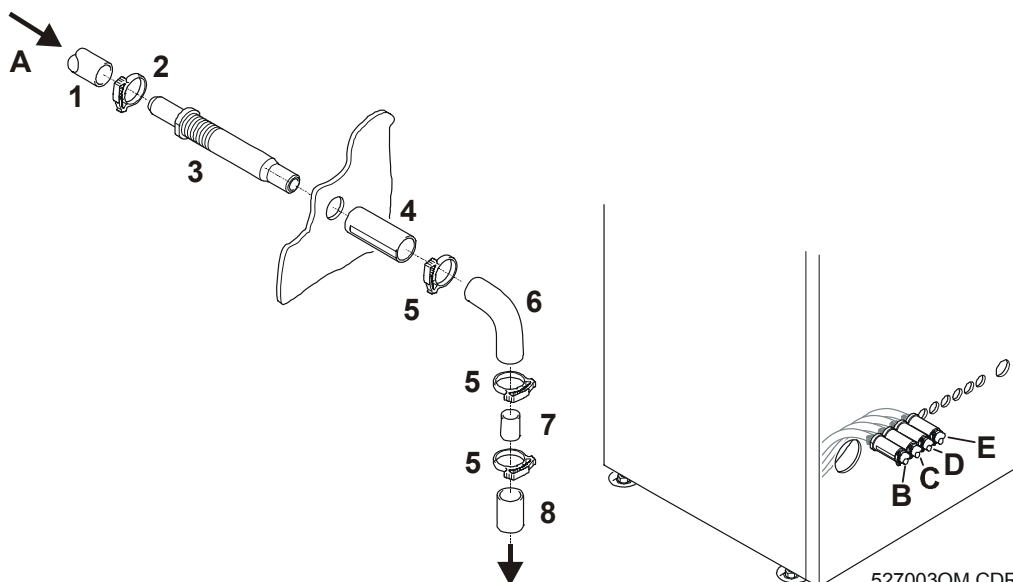


Figure 22

- | | | | |
|-----|----------------------------|-----|------------------------|
| (A) | Drain direction | (D) | Water drain / overflow |
| (B) | Developer drain / overflow | (E) | Safety overflow, tanks |
| (C) | Fixer drain / overflow | | |

| Pos | Designation | Configuration |
|-----|--|---|
| 1 | PVC hose Ø 19x2.5 mm (0.75x0.10 inch) transparent | Pre-installed in the machine |
| 2 | Hose clamp | |
| 3 | Hose connection stub Ø 20 mm (0.79 inch) | |
| 4 | Threaded bush | Included in the accessory box |
| 5 | Hose clamp | Not included in shipment, can be ordered, CM+9037200400 |
| 6 | Rubber elbow | Not included in shipment, can be ordered, CM+9889629521 |
| 7 | Pipe stub Ø 20 mm (0.79 inch) | Not included in shipment, can be ordered, CM+7839185010 |
| 8 | PVC hose, Developer (red, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Fixer (blue, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Water (transparent, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) | Not included in shipment, can be ordered CM+0000064133 CM+0000064134 CM+0000007620 |

- Combine the hoses of the safety overflow (OVERFLOW) and water (WAT) with a Y piece and connect them with one drain hose, if this is permitted by the local regulations. Install the drain hose to the floor drain.

6.5 Supply and disposal through the floor

6.5.1 Installing the exhaust connection



The machine internal exhaust must always be guided out of the machine.



- The film processor has an integrated exhaust duct (A). Crossover (B) and the flexible exhaust hose (C) (\varnothing 100 mm / 3.94 inch) are pre-mounted and included in the accessory box.
- Exhaust connection: \varnothing 100 mm (3.94 inch)
- Max. length of the exhaust hose: 5 m (196.85 inch) (if this length is exceeded install an additional fan!)
- Exhaust volume: min. 50 m³/h max. 100 m³/h

- (A) Exhaust duct
 (B) Crossover
 (C) Flexible exhaust hose inside
 (D) On-site exhaust pipe
 (F) Exhaust connection stub
 (G) Hose clamp
 (H) Floor
 (core hole for exhaust connection:
 $\varnothing \geq 114$ mm (4.49 inch))

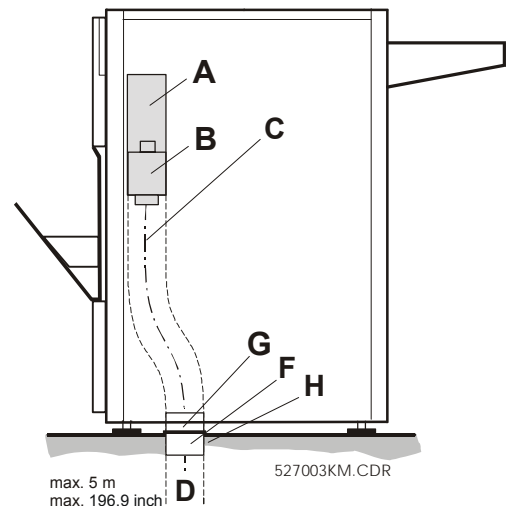


Figure 23

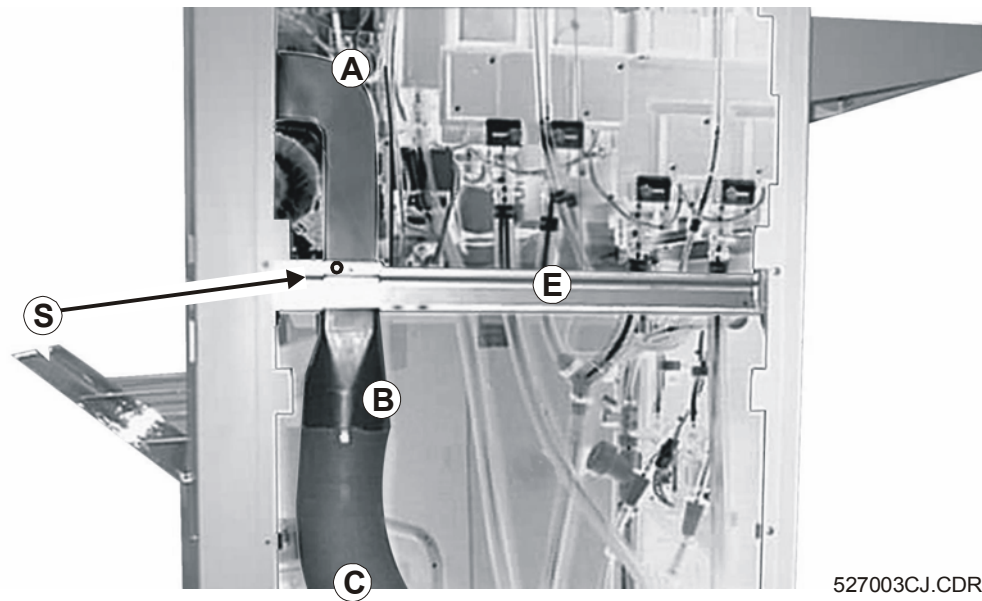


Figure 24

- Loosen the mounting screw (S).
- Push the crossover section (B) onto the exhaust duct (A).
- Tighten the mounting screw (S).
- Frame (E)

- Connect the exhaust hose (C) on the exhaust stub (F) and fix with a hose clamp (G).
- Connect the on-site exhaust pipe (D) on the exhaust stub (F) and fix with a hose clamp (G).
- Tighten the screw connection of the two exhaust stubs (F).

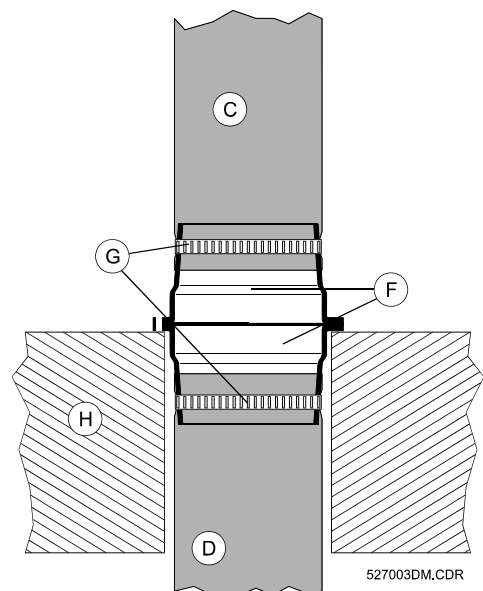


Figure 25

This installation requires an additional exhaust stub Ø 100 (F)
CM+9522030091

6.5.2

Installing supply hoses



Only use **fiber-reinforced** PVC hoses Ø 10x3 mm (0.39x0.12 inch) for the external hose connections (outside the machine)!

Position the hoses **without kinks**!

Classic E.O.S. (5270/100)

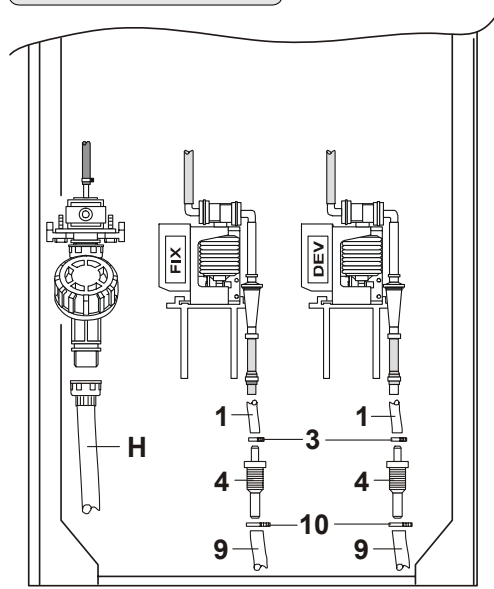


Figure 26

Classic E.O.S. CL (5270/105)

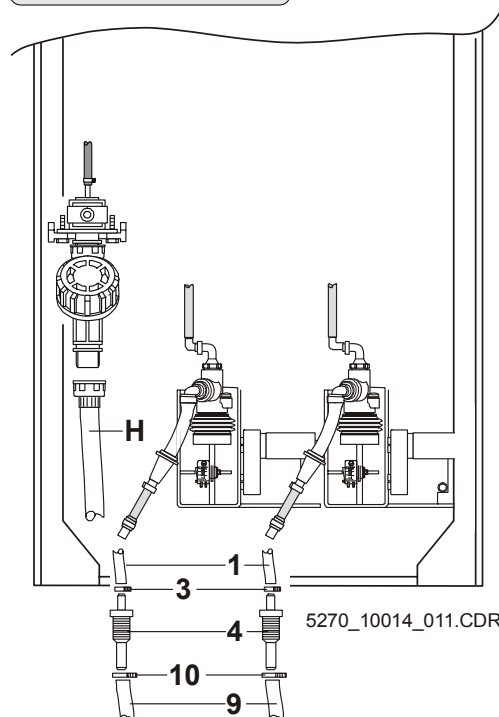


Figure 27

| POS | Designation | Configuration |
|-----|---|---|
| 1 | PVC hose Ø 9x1.5 mm (0.35x0.06 inch) | Pre-installed in the machine |
| 3 | Hose clamp | |
| 4 | Hose connection stub | |
| 10 | Hose clamp | Not included in shipment, can be ordered, CM+9037200230 |
| 9 | PVC hose Ø 10x3 mm (0.39x0.12 inch) fiber-reinforced Developer: red Fixer: blue | Not included in the shipment, can be ordered, CM+0000064082 CM+0000064083 |
| H | Safety pressure hose | Pre-installed |

- If necessary shorten the internal supply hoses and insert the hose connection again.
- Connect the fiber-reinforced (external) PVC hoses with the hose connection of the internal supply hoses.
- Position the hoses together through the opening in the bottom to the mixer or to the individual tanks.

Install the water pressure hose



For installation of the water safety pressure hose refer also to Chapter 14, Section 8.

- Connect the union nut (A) on the safety pressure hose together with the dirt filter (B).
- Tighten the union nut (A) with a pipe wrench (tightness!).
- Connect the safety pressure hose with the water supply.

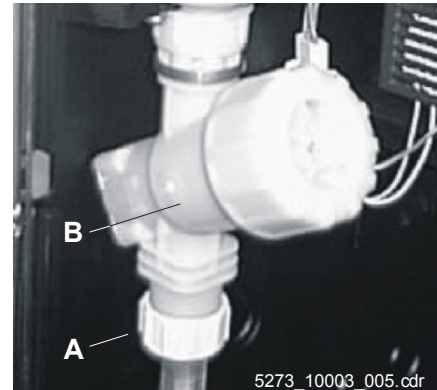


Figure 28



If a pressure reducer is included in the installation, set the pressure to 2-6 bar.

6.5.3 Installing the disposal hoses

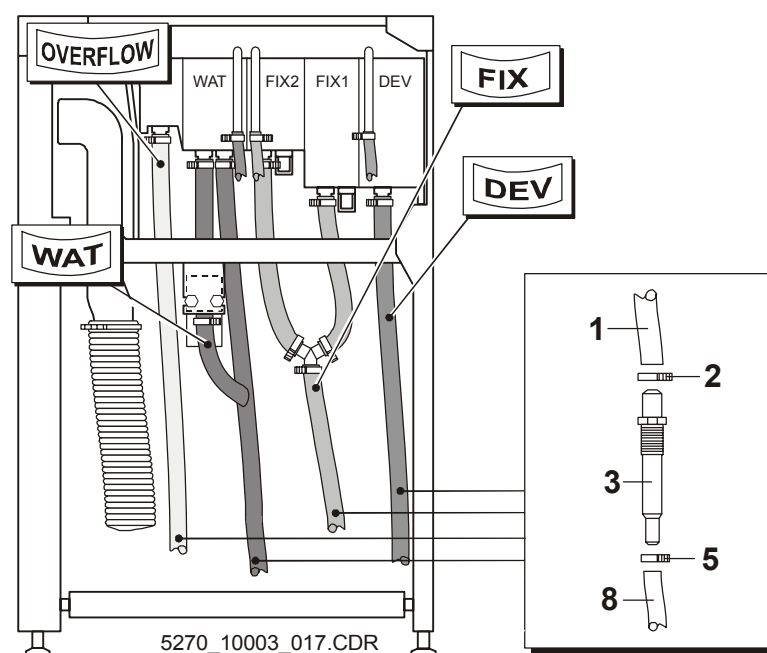


Figure 29

| Pos | Designation | Configuration |
|-----|--|--|
| 1 | PVC hose Ø 19x2.5 mm (0.75x0.10 inch) transparent | Pre-installed in the machine |
| 2 | Hose clamp | |
| 3 | Hose connection stub Ø 20 mm (0.79 inch) | |
| 5 | Hose clamp | Not included in the shipment, CM+9037200400 |
| 8 | PVC hose, Developer (red, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Fixer (blue, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Water (transparent, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) | Not included in shipment, can be ordered CM+0000064133 CM+0000064134 CM+0000007620 |

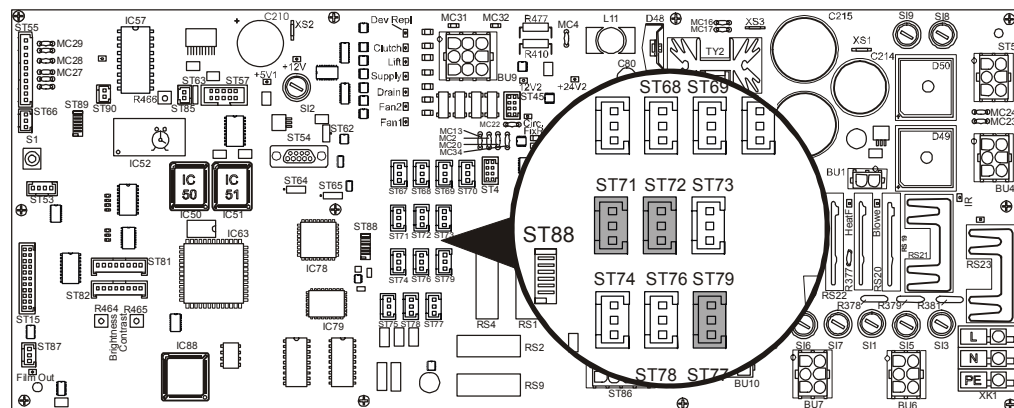
- Shorten the internal disposal hoses if necessary and insert the hose connection stub (3) again.
- Connect the fiber-reinforced (external) PVC hoses with the hose connection stub (3) of the internal disposal hoses.
- Position the developer / fixer disposal hoses together through the opening in the bottom to the central disposal site.
- Combine the hoses of the safety overflow (OVERFLOW) and water (WAT) with a Y piece and connect them with one drain hose, if this is permitted by the local regulations. Install the drain hose to the floor drain.

7

Connecting the Level Sensors

7.1

Replenisher tanks



CM+952709450_ (F8.5270.7890._)

5273_10003_009.cdr

Figure 30

7.1.1

Connect the level sensors of the replenisher tanks

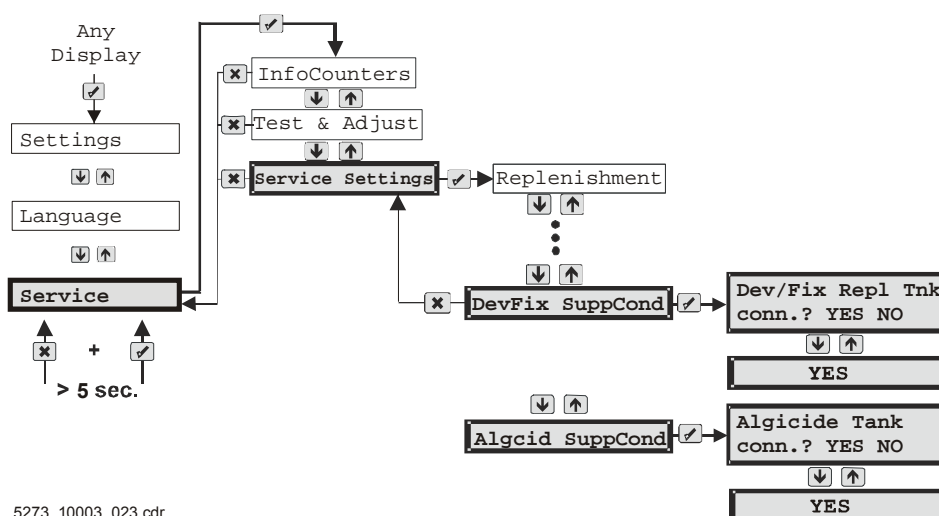
- Connect the level sensors of the replenisher tanks on the Control Board PCB1 as follows:

| | |
|------------------|-------|
| Developer supply | ST 71 |
| Fixer supply | ST 72 |
| Anti-algae level | ST 79 |

7.1.2

Set the code for the replenisher tank level connection

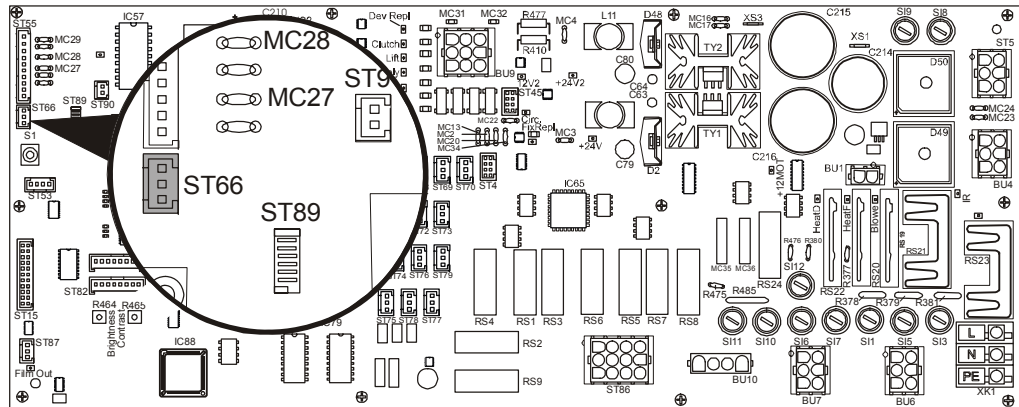
- Call up the SERVICE program.
- In the dialog window <Dev/Fix Repl Tnk conn.??> or <Algicide Tank conn.??> enter → <YES>.



5273_10003_023.cdr

Figure 31

Mixer



5273_10003_010.cdr

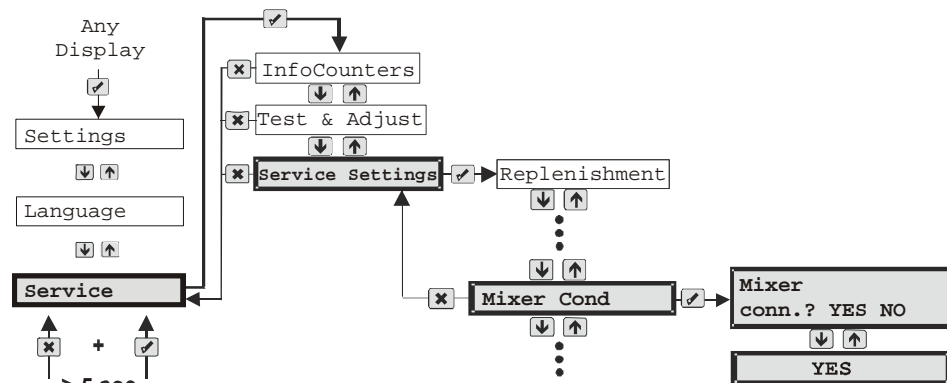
Figure 32

Connecting the Mixer communication cable

- Plug the communication cable of the Chemix Mixer (20 m / 787.4 inch long), CM+9528030301, into the Control Board PCB1 / ST66.

Set the code of the mixer communication

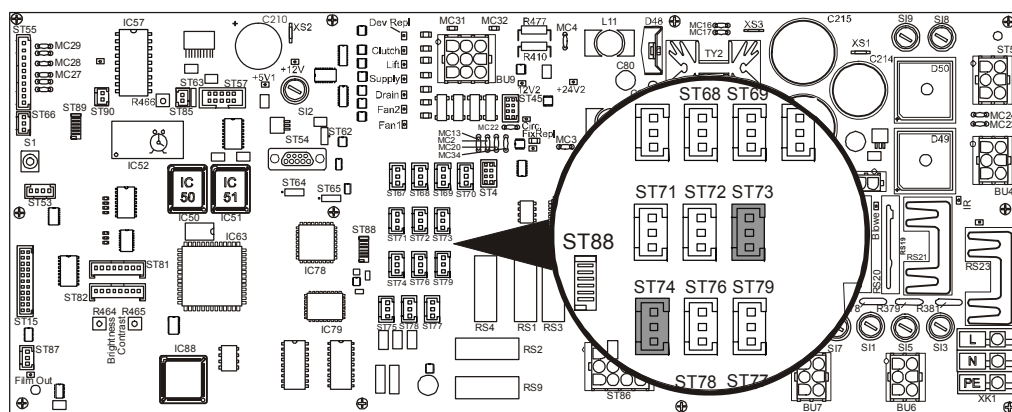
- Call up the SERVICE program.
- In the dialog window **<Mixer conn. ?>** enter → **<YES>**.



5273 10003 024.cdr

Figure 33

7.3 Disposal tanks



CM+952709450_ (F8.5270.7890._)

5273_10003_011.cdr

Figure 34

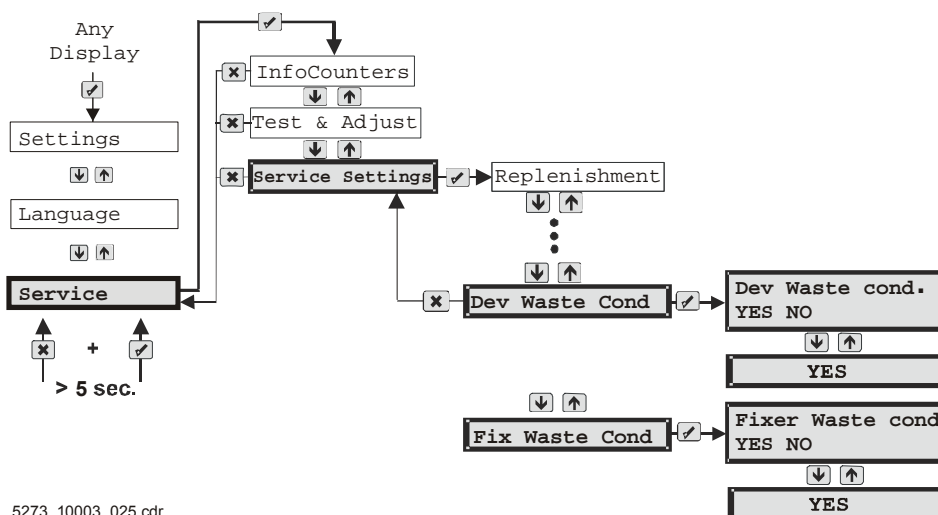
7.3.1 Connect the level sensors of the disposal tanks

- Connect the level sensors of the individual disposal tanks on the Control Board PCB1 as follows:

| | |
|--------------------|-------|
| Developer disposal | ST 73 |
| Fixer disposal | ST 74 |

7.3.2 Set the code for the disposal tank level sensors

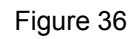
- Call up the SERVICE program.
- In dialog window <Devel Waste cond.> or <Fixer Waste cond.> enter → <YES>.



5273_10003_025.cdr

Figure 35

Adjusting Volume, Brightness, and Contrast on the Control Board PCB1



- Adjust the volume of the buzzer, and brightness and contrast of the display on the control panel with the potentiometers on the Control Board PCB1:

| | |
|--------------------|------|
| Buzzer volume | R466 |
| Display brightness | R464 |
| Display contrast | R465 |

9 Starting Operation

9.1 Preparing the startup procedure



- Verify that the power plug is not plugged in.
- Rinse all machine tanks.
- Rinse the racks well.

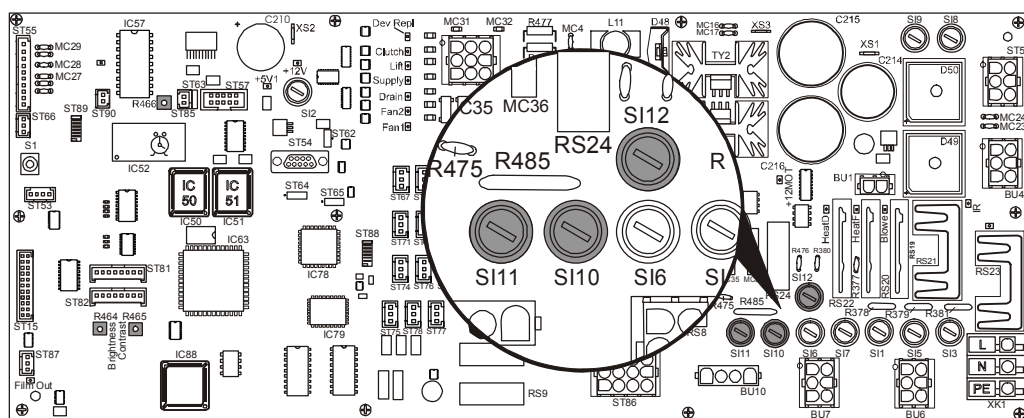
9.2 Adapting the mains supply



Ex factory the machine is configured for 230 V.



Prior to the connection of the mains supply the voltage setting must be checked and adapted to the local conditions!



CM+952709450_ (F8.5270.7890._)

5273_10003_015.cdr

Figure 37

- The voltage adaptation is made on the Control Board PCB1. The 10A fuse, which is the standard fuse for SI10 is inserted according to the following allocation:

| Fuse | Adaptation to mains voltage |
|--------------------|-----------------------------|
| 10 A in SI12 → = → | 200 V |
| 10 A in SI11 → = → | 208 V |
| 10 A in SI10 → = → | 230 V = delivery status |



After adaptation of the mains voltage a TEACH IN must be executed (service program <Test & Adjust> → <Teach In>)

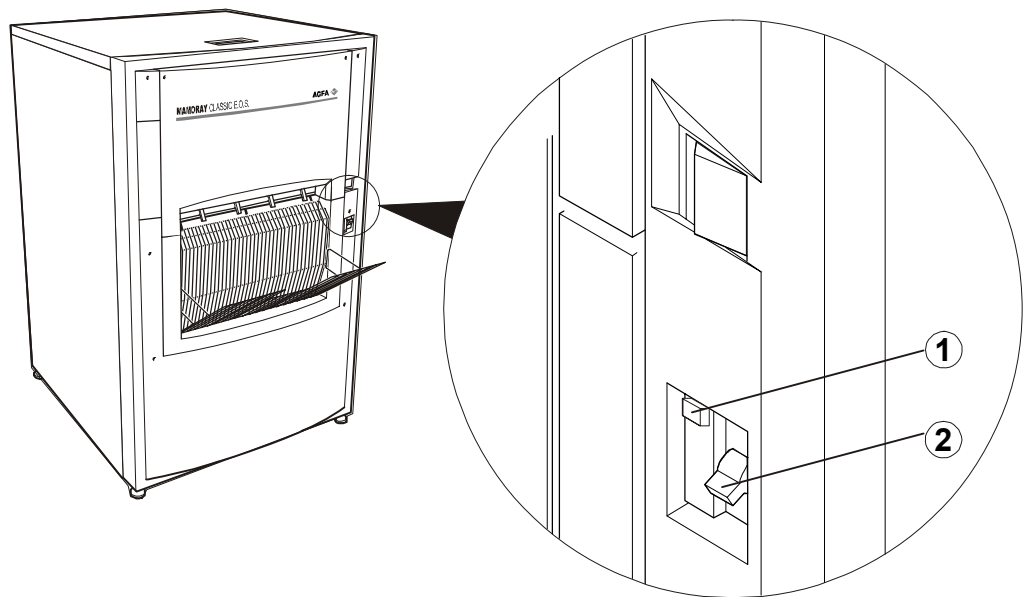
9.3 Checking the function of the GFI switch 0FI



A GFI switch: ($I_N = 30\text{ mA}$ in compliance with VDE 664) is integrated in the machine.

Check the function of the ground fault interrupter (GFI switch).

- ① Press the button, this releases / deactivates the GFI switch!
- ② Activate the GFI switch by resetting the toggle switch.
(No automatic reset)



5272_10003_07.cdr

Figure 38



Inform the customer that this procedure must be carried out once per month.



The machine must not be put in operation without an installed GFI switch!

9.4 Filling the developer and fixer tanks

- Close the shut-off valves in the developer / fixer / water tanks.



The O-rings at the shut-off valve are not lubricated with chemical-resistant grease.

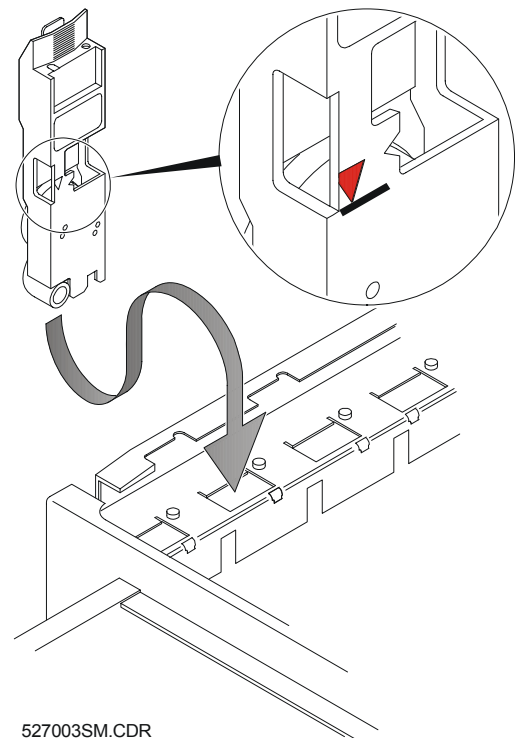
Mix the chemicals for the developer and fixer according to the prescription in a separate container or in the mixer!

| Tank | Developer tank | Fixer tank 1 | Fixer tank 2 | Water |
|----------|-------------------------|------------------------|--------------------------|--------------------------|
| Quantity | 8.8 l (197.59 fl.oz) | 10 l (338.18 fl.oz) | 5.8 l (196.15 fl. oz) | 5.8 l (196.15 fl. oz) |

9.4.1 Manual filling (in Type 5270/100 and Type 5270/105)



- Fill the fixer tank first, then fill the developer tank.
- Fill the tanks up to the level marking.



527003SM.CDR

Figure 39

9.4.2 Automatic filling with the AUTOFILL function (only in Type 5270/105)



Automatic filling by means of the AUTOFILL function is only possible after a calibration was made.

The machine can fill its tanks automatically. Prior to activation of the operating mode “AUTOFILL” ensure that enough chemical solution is provided in the replenisher tanks or in the Mixer. The menu option “AUTOFILL” is only offered if the capacity of the two replenisher pumps is more than 1 l/min.

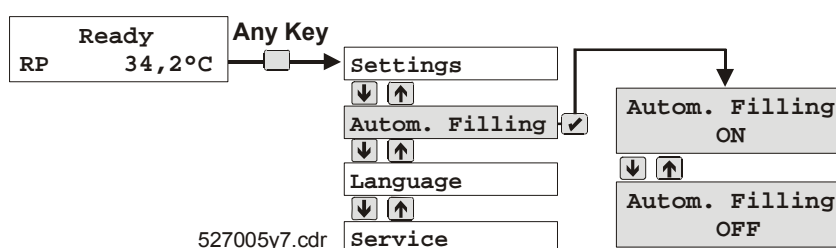


Figure 40

9.5 Switching on the machine

- ① Connect the power plug.
- ② Switch on the mains switch.

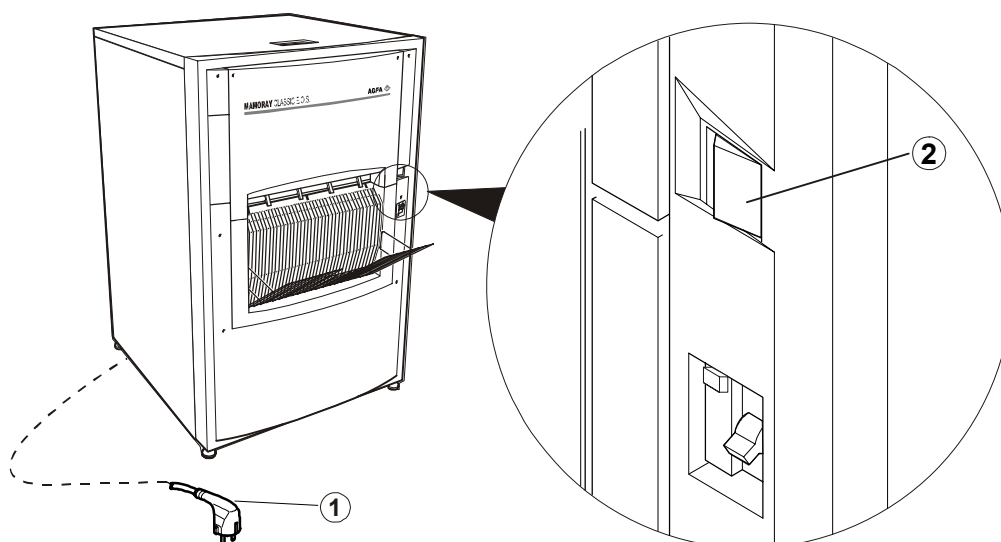


Figure 41

5272_10003_08.cdr

9.6

Calibrating the replenishment rate of developer and fixer upon first startup

The machine can only operate if the calibration of the developer and fixer replenishment rates has been made.



The replenishment pumps for developer and fixer have fixed rates and cannot be adjusted.

For standard replenishment rates see Chapter 3, Section 9.9.13.

A calibration of the replenishment rate is made by changing the pump time. Based on the replenishment rate set up in the SERVICE program <Settings> and the memorized pump capacity, the machine calculates the running time of the replenishment pumps.

Preparations:

- Pull out the replenisher supply elbow of the developer or fixer.
- Hold the elbow in a measuring glass (minimum capacity: 1000 ml (33.82 fl.oz)).



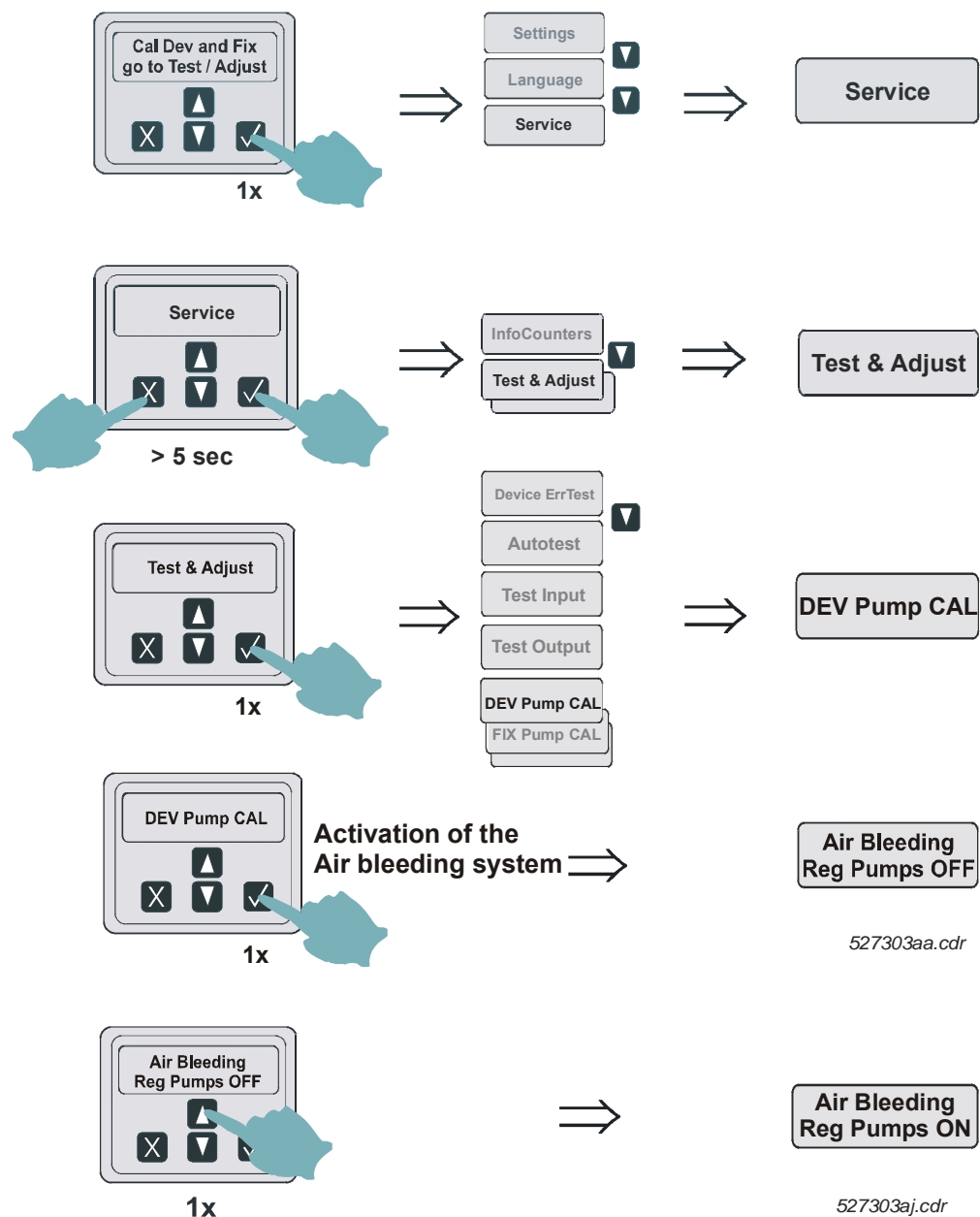
Figure 42

- Switch on the machine.
The display in the SERVICE program shows the following status message:


**Cal Dev and Fix
go to Test / Adjust**

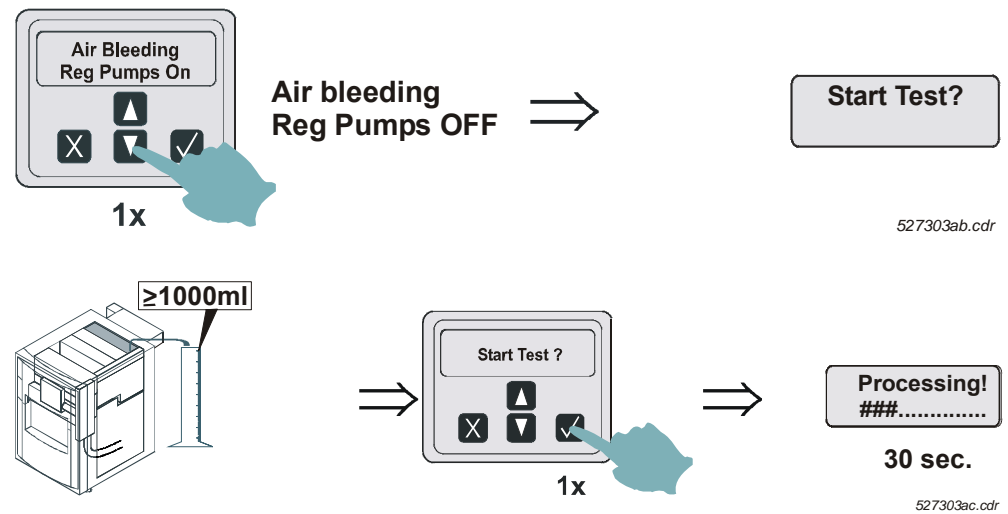
Execution of the calibration in the SERVICE program:

- In order to calibrate the **developer replenishment rate** proceed according to the illustrations:



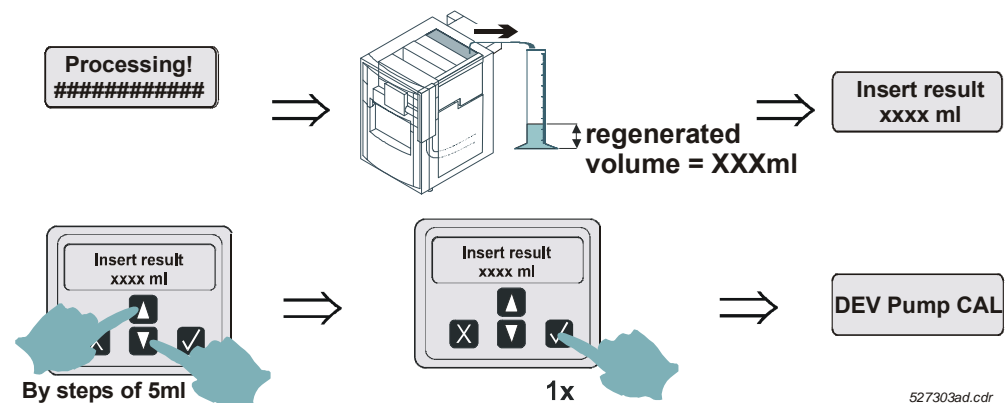
“Air Bleeding” must be repeated until the pump and the hose system have been bled, and the chemical solutions are supplied without any air bubbles. The removed chemicals can be poured back into the respective machine tanks.


- As soon as the supplied chemicals do not show any bubbles terminate the “Air Bleeding” procedure by pressing the  key.

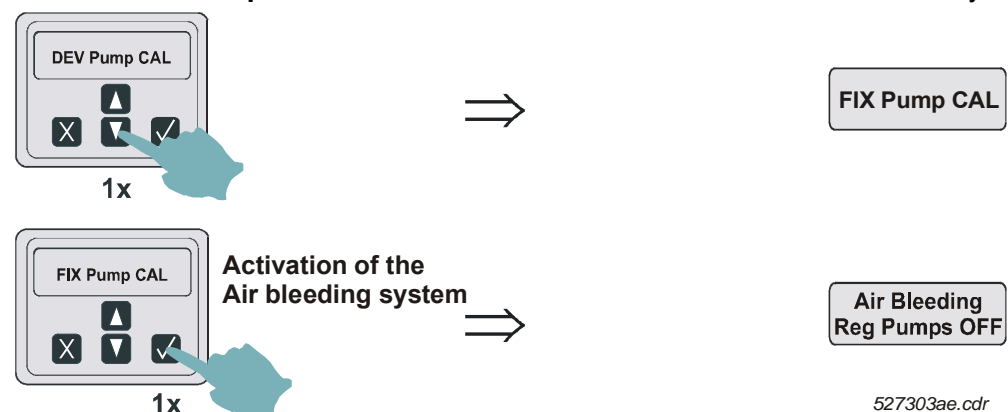


- After the procedure has been completed, read the supplied amount of DEV at the measuring glass.

Enter the measured value via the   keys on the display and confirm with the Enter key .

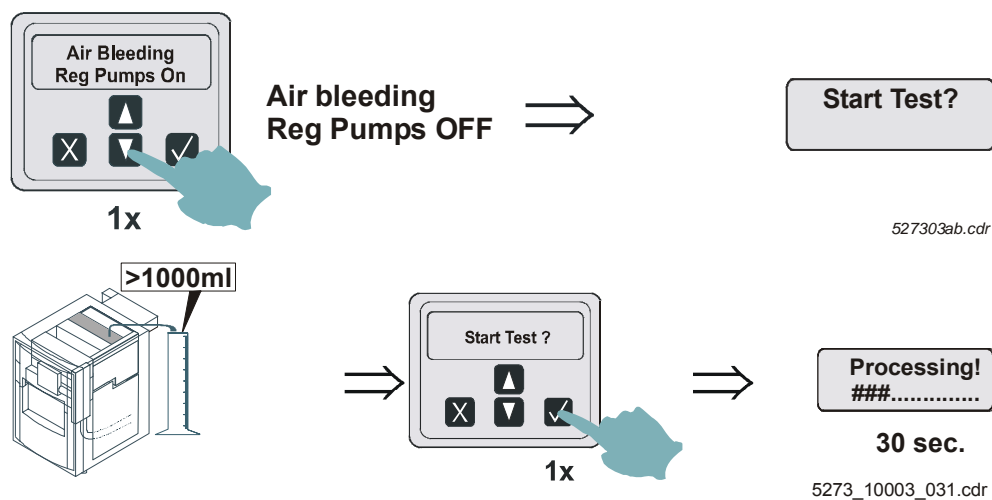


- Select **Fix Pump Calibration** and confirm this selection with the  key.

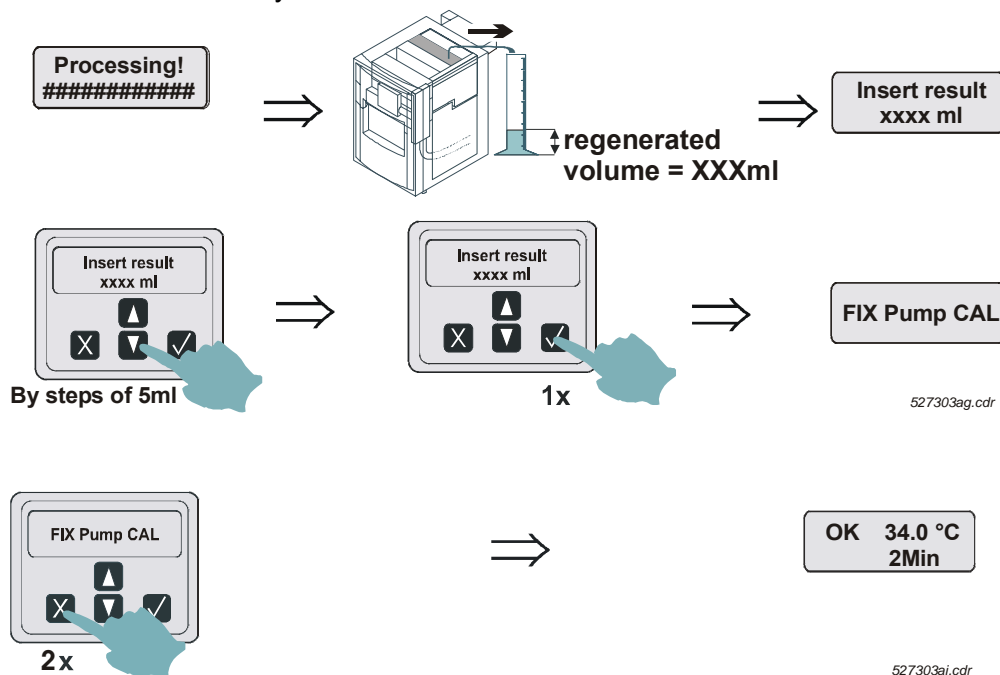




- As soon as the supplied chemicals do not show any bubbles terminate the “Air Bleeding” procedure by pressing the key.



- After the procedure has been completed, read the supplied amount of FIX at the measuring glass.
- Enter the measured value via the keys on the display and confirm with the Enter key .



9.7

Reset after switching on the machine

- The machine executes a RESET (no BASEINIT) after switching on.
- All data in the EEPROM (also customer specific data) is kept.
- The machine checks tank contents developer / fixer / water and refills if necessary.
- If the developer, fixer, and water have the required level, all circulation pumps are triggered, the drive motor runs in standby speed (50 cm/min / 19.7 inch/min) during warm-up. This also applies if the setting in the program **<Service Settings>** → is set on **<Drive On Mode FILM>**.
- After the process cycle end (all IR heaters switch OFF) the machine goes back to the warm-up phase.

The applications CURIX, MAMMO, Fuji-Standalone, Fuji I/F DOCKING and LR3300 can be changed via the SERVICE program.

The selection of an application must be confirmed with YES. It is saved upon exit from the SERVICE program.

| Type | Application | Process HT/60 s | Process IP/90 s | Process RP/2 min | Process Ext./3 min |
|----------|-------------|-----------------|-----------------|------------------|--------------------|
| 5270/100 | Curix | YES | YES | YES | NO |
| 5270/105 | LR3300 | YES | YES | YES | NO |



After modification of the application a machine reset with BASEINIT is executed. The machine loads the new parameters.

9.8

BASEINIT

9.8.1

Only execute a BASEINIT in case of:

- Software change
- Inexplicable functional problems



With a BASEINIT all standard process data is loaded from the EPROM (IC 50/51) into the EEPROM. All customer-specific settings in the EEPROM are overwritten and must be entered again via the SERVICE program <Service Settings>.


9.8.2

Initiate a BASEINIT:

SERVICE program

A BASEINIT is carried out via the SERVICE program
<Service Settings> → <Base Init>.

Manual routine

The machine is switched off. Press the  key and hold it, switch on the machine, wait until the status indication comes up on the display. Depending on the set process and the current developer temperature the following status is displayed:

| | |
|----|--------|
| RP | 24.9°C |
|----|--------|

BASEINIT has been completed.

Automatic routine

The machine initiates an automatic BASEINIT if a different software version number than the one stored in the EEPROM is detected in the EPROM (IC50/51) during the initialization.

On principle all customer-specific settings are reset to DEFAULT during a BASEINIT.

Exception:

The following settings are only overwritten if a plausibility check detects incorrect limit values.

| Settings | Incorrect limit values during plausibility check |
|--|--|
| Replenisher pump capacity | < 150ml/min or > 1.5l/min (< 5.07fl.oz/min or >50.73fl.oz./min) |
| Display language | not defined |
| Process application | other than CURIX, MAMMO, FUJI Standalone, FUJI IF Docking, LR3300 |
| Calibration of the developer temperature | > +/- 1°C |

The contents of the temporary infocounter is deleted. If the system detects an invalid process application, temporary and non-temporary infocounters are deleted.



DEFAULT settings after a BASEINIT
see Chapter 3, Section 9.9.11

9.9**System settings****9.9.1****Setting the software switches in the SERVICE program**

The software switches allow changing and/or activating of special non-standard functions and of standard parameters.

These settings may be entered in the SERVICE program <Service Settings>.

9.9.2**Setting the process parameters on the control panel**

Depending on the customers' wishes the parameter can be changed.



Back key

Press this key to exit an input window, dialog box, or a menu. If you press this key in an input window any modifications made in this window will be canceled and reset to the initial values.



Selection keys

Use these keys to scroll through the options in the menus or to change values in input windows.



Enter / Confirmation key

Use this key to show the options in a menu or to confirm a dialog. A confirmed dialog opens the corresponding input window. Entered data is confirmed and accepted.



Translation of display texts (12 available languages) see Chapter 6.7.

Diagram:
Setting the process parameters on the control panel

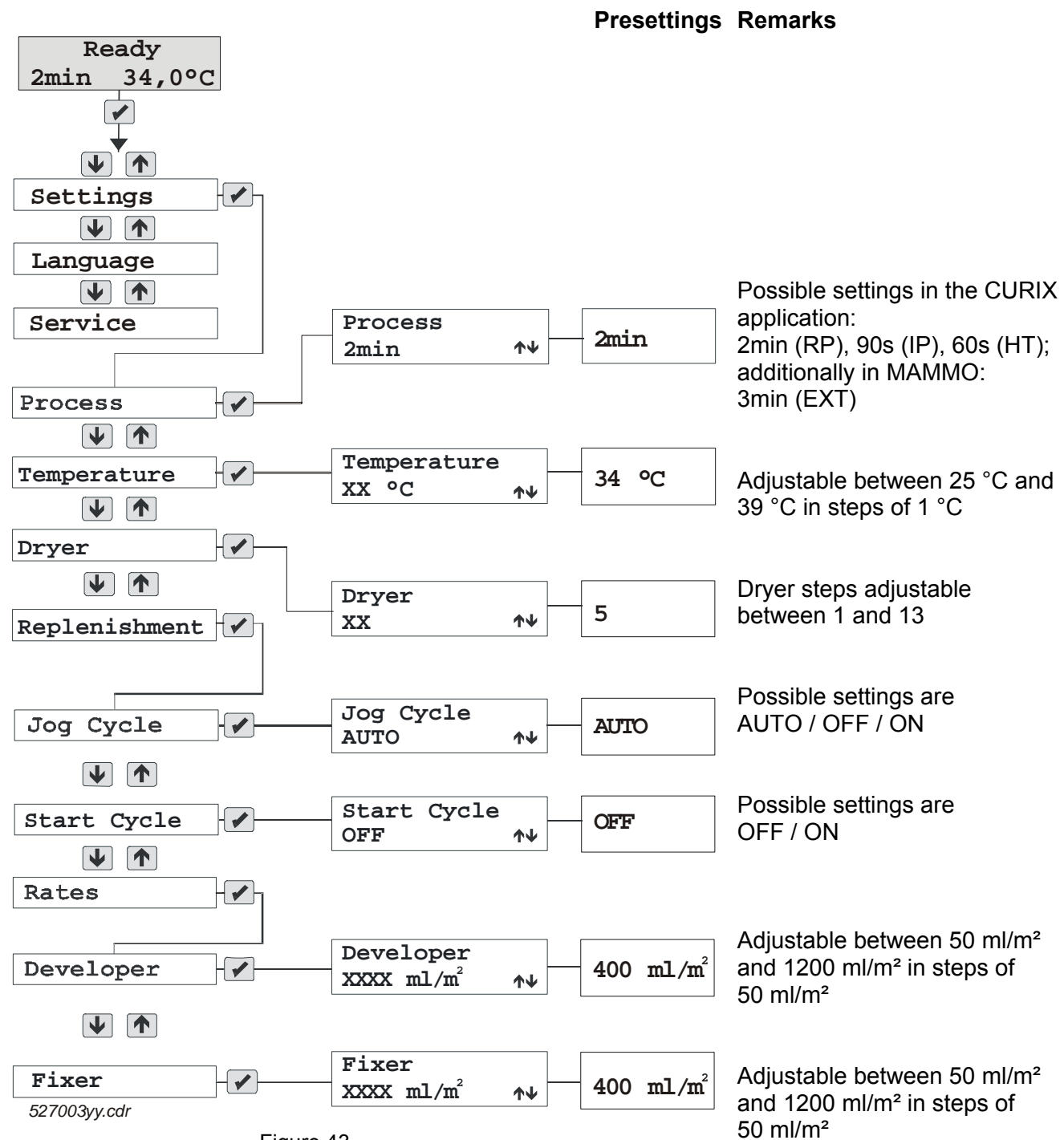




Figure 43

9.9.3 Access to the SERVICE program

Access the SERVICE program by pressing the keys  and  simultaneously with the thumb and holding them (5sec).

9.9.4 Setting date and time

- Call up the menu option <Set Date/Time>:

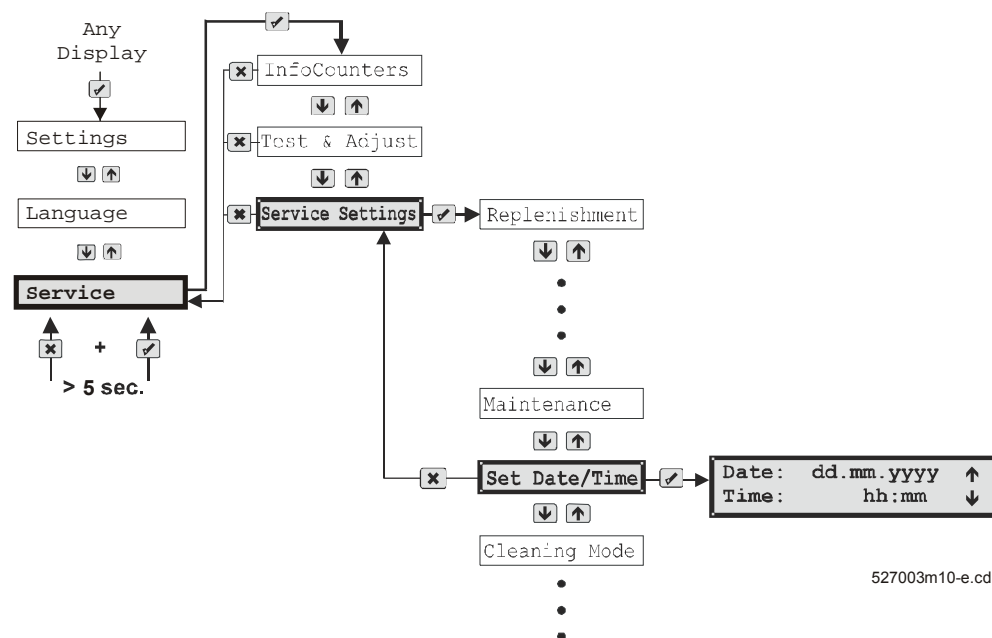









Figure 44

- Set date and time:

| Action | Keys | Result |
|------------------------|---|---------------------------------|
| Select <Set Date/Time> |  | Date: dd.mm.yyyy Time: hh:mm |
| Set the date |   | Date: dd.mm.yyyy |
| Confirm the set date |  | |
| Set the time |   | Time: hh:mm |
| Confirm the set time |  | |



- Press this key to cancel a setting.

Date:

dd = day

mm = month

yyyy = year

Time:

hh = hours

mm = minutes

9.9.5 Setting the service intervals in the SERVICE program

To ensure that the machine starts a new service interval after the installation, the service indicator must be reset.

- Call up the menu option <Maintenance>:

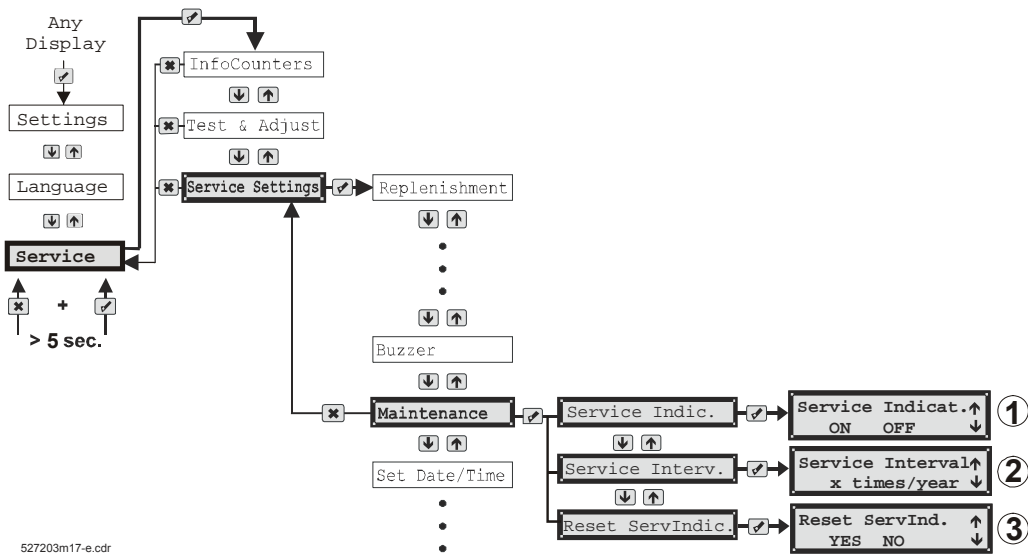


Figure 45

- Reset the service indicator:

| Action | | Keys | Result |
|--------|--|------|------------------------------|
| (1) | Select <Service Indic.> | | Service Indic ON OFF |
| | Activate the service indicator; set ON | | Service Indic. ON |
| | Confirm the input | | |

The service indicator (1) must be activated, only then the SERVICE interval (2) can be selected and the service indicator (3) can be reset.

| | | | |
|-----|---|--|----------------------------------|
| (2) | Select <Service Interval> | | Service Interval x times/year |
| | Select 2, 3, or 4 times/year | | 2 times/year (for example) |
| | Confirm the input | | |
| (3) | Select <Reset ServIndic> | | Reset ServIndic YES NO |
| | The service indicator is reset as the new date is saved | | Reset ServIndic. YES |
| | Confirm the input | | |

9.9.6

Executing a <Teach In> in the SERVICE program



As the current values depend on the actually applied supply voltages, they must be read in via the <Teach In>.



The <Teach In>.procedure must be completed to be able to exit this dialog.

- Call up the menu option <Teach In>:

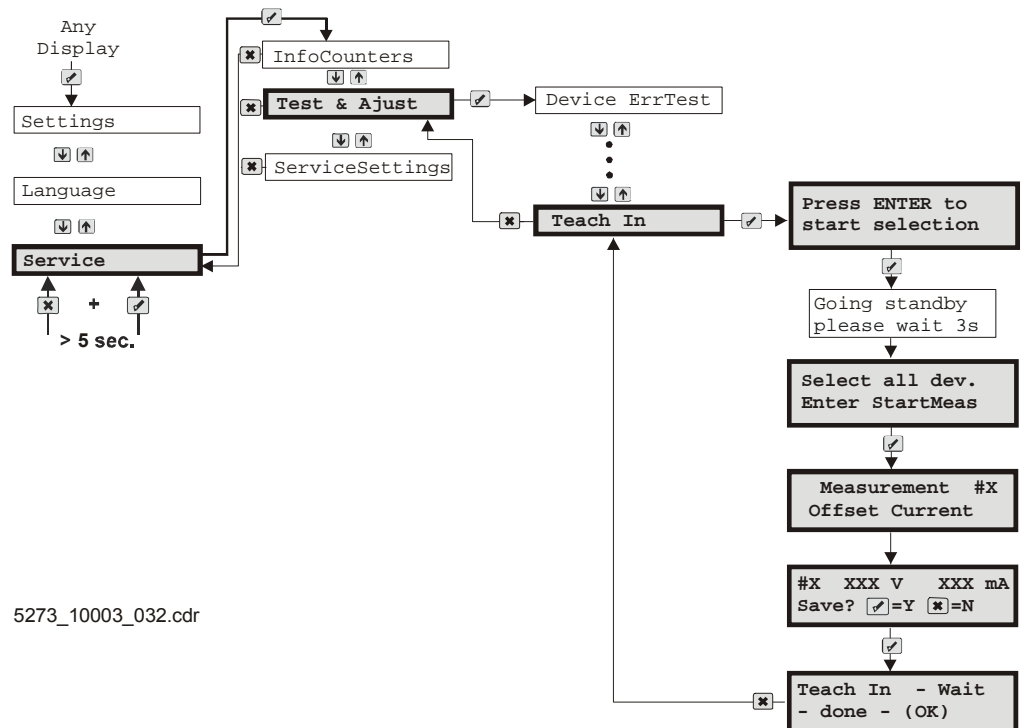


Figure 46

#x = number of the consumer
 XXX V = voltage
 XXX mA = measured current
 [Y] =Y = yes
 [N] =N = no (new value not yet saved, old value is kept)

<Teach In> procedure:

| Action | Keys | Display text |
|--|-------------------------------------|---|
| Select the dialog window <Teach In> | <input checked="" type="checkbox"/> | Press ENTER to start selection |
| | <input checked="" type="checkbox"/> | Going standby please wait 3s |
| All consumers are switched off. | | Select all dev. Enter StartMeas |
| The supply voltages of the machine and the currents of the consumers are measured. | <input checked="" type="checkbox"/> | Measurement #X Offset Current |
| The first measurement is carried out and then the result is displayed. | | #X: XXX V XXX mA Save ? $\sqrt{}$ =Y x=N |
| Save the measurement. | <input checked="" type="checkbox"/> | #X: XXX V XXX mA |
| The next measurement is carried out. If there are no errors, current and voltage are stored in the EEPROM after ENTER. | | |
| Once all consumers have been measured and the results saved, the following message is displayed: | | Teach in - WAIT -done- (OK) |
| Exit the function. | <input type="checkbox"/> | |

Error messages

In the following cases a warning is displayed during the <Teach In>:

- The measured current value is outside the given range of values:

```
#xx WARN: aaaamA
Range=bbbb-cccc!
```

xx = number of the consumer
 aaaa = measured current
 bbbb = minimum permissible value
 cccc = maximum permissible value

- If the current value cannot be measured within the given maximum measuring time, the measurement will also be aborted with an error message:

```
#xx TO:yyyy-zzzz
ccccms >aa%/bbbb
```

xx = number of the consumer
 yyyy = last current value
 zzzz = actual current value
 cccc = maximum measuring time
 aa = max. difference of two current values in percentage
 bbbb = difference of two current values, absolute value



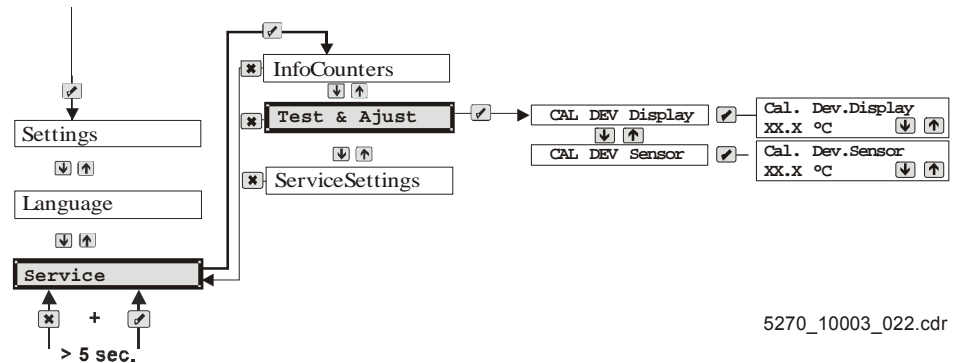
For a table of the current values see Chapter 6.2

9.9.7

Calibrating the Developer Temperature (CAL)

The developer temperature sensor can be calibrated with the function **<CAL DEV Sensor>**. The adjustment range is $\pm 1\text{ }^{\circ}\text{C}$ in steps of $0.1\text{ }^{\circ}\text{C}$.

- Check the developer temperature with a thermometer.
- Enter the resulting temperature under SERVICE program **<CAL DEV Sensor>**.



5270_10003_022.cdr

Figure 47

Use the function **<CAL DEV Display>** to adapt the temperature indication on the display. The adjustment range is $\pm 1\text{ }^{\circ}\text{C}$ in steps of $0.1\text{ }^{\circ}\text{C}$.

9.9.8

Resetting the temporary infocounters in the SERVICE program



Delete the contents of the temporary infocounter after an installation or maintenance, as it contains information about film, developer and fixer consumption between the service intervals.

The following temporary data is no longer available after deletion of the infocounter:

- Consumption of developer solution
- Consumption of fixer solution
- Processed film in square meters

- Call up the dialog window:

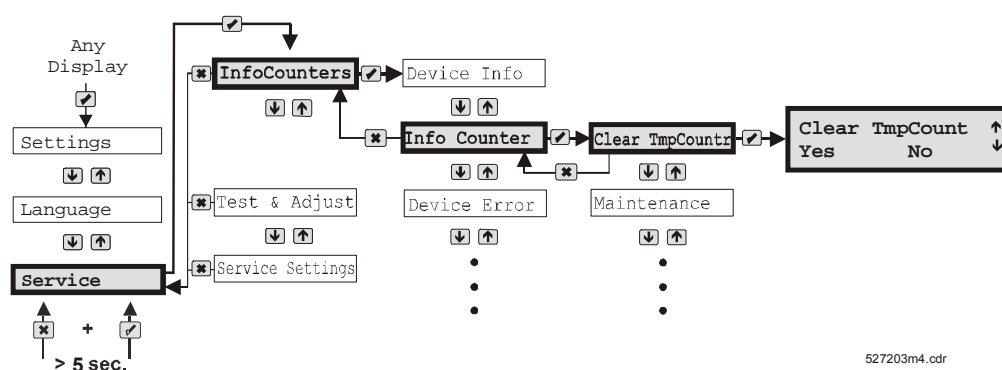


Figure 48

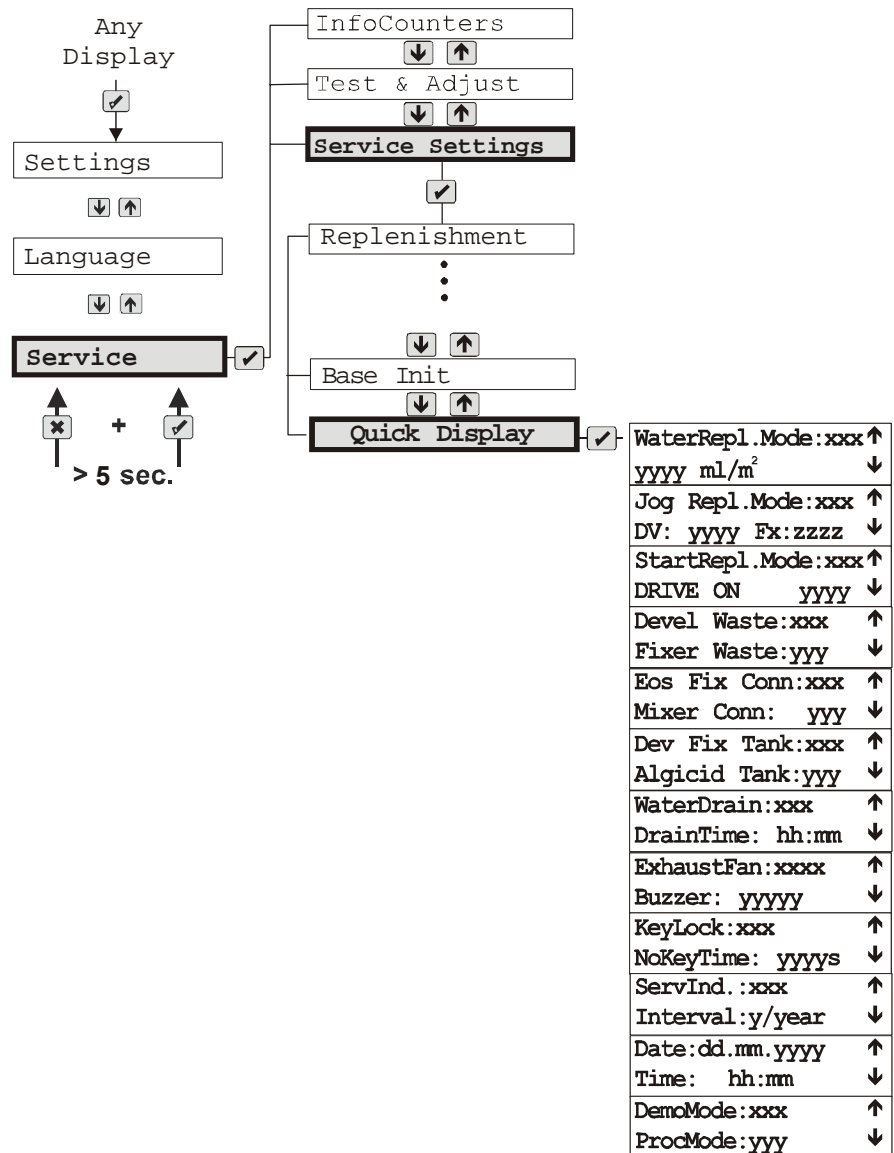
- Delete the infocounter:

| Action | Keys | Result |
|--|------|---------------------------|
| Call up the <InfoCounters> menu and confirm | | Info Counter |
| Select the dialog window <Clear TEMPCounter> | | Clear TmpCounter |
| Confirm the input | | Clear Tmp Count Yes No |
| Select <Yes> | | Clear Tmp Count Yes |
| Confirm the selection | | Data deleted |

tmp = temporary data

9.9.9 Display all <Service Settings> in the SERVICE program with <Quick Display>

The dialog window <Quick Display> under SERVICE program <Service Settings> → <Quickdisplay> offers an overview over the setup in the service settings.




5273_10003_021.cdr

Figure 49

9.9.10

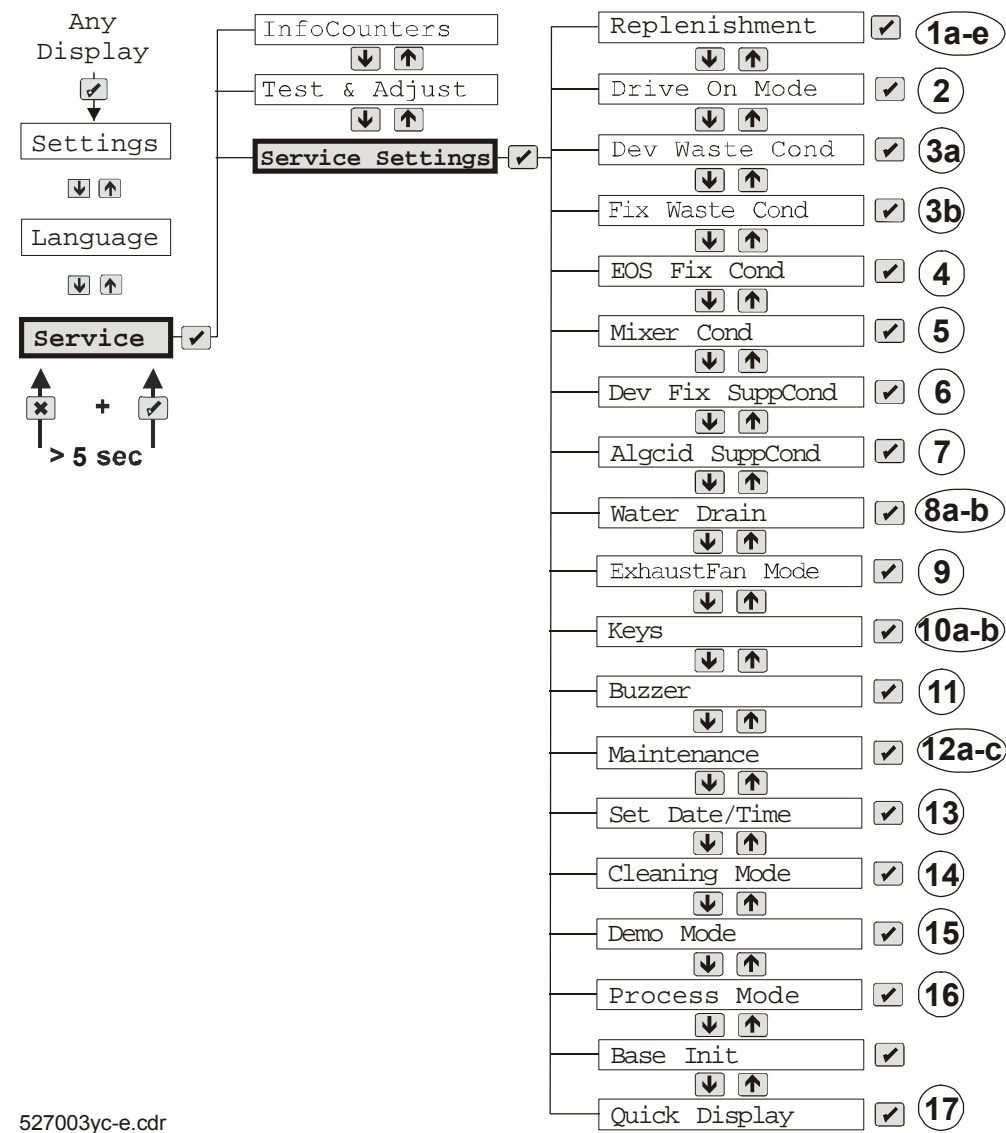
Setting the customer specific settings in the SERVICE program
<Service Settings>



During first installation further settings can be set in the SERVICE program
<Service Settings>.

- Call up the dialog window:

No.
Service
Settings



527003yc-e.cdr

Figure 50


| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|-------------------------|--------------------------------|--|
| 1a Start replenishment (Menu Service settings → Replenishment → Start Replen.) | Start repl. NO | Start repl. NO ↓ ↑ | Deactivate the start replenishment of developer and fixer with 400 ml each. |
| | | Start repl. YES | Activate. |
| | | | |
| 1b Water replenishment (Menu Service settings → Replenishment → Wat. Repl. Mode) | Surface Replen. CONT | Surface Replen. CONT ↓ ↑ | Process time dependent water supply: The water supply starts with the film order and end after the process time has elapsed. |
| | | Surface Replen. SURF ↓ ↑ | Surface dependent water supply: When film feed is detected a process dependent delay time counts down before the water replenishment starts (film just before the water tank). The replenishment rate depends on the set value of the water replenishment (see 1c). |
| | | Surface Replen. ALGAE | Prevention of algae: mode CONT. + 5min. In addition, water is supplied every 30 min and always for 5 min if no film is developed. |






| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|--|---|--|
| 1c Setting of the water replenishment rate ml/m ² (Menu Service settings→ Replenishment →Water Repl. Value) | Wat.Repl.Value 30000 ml/m ² | Wat.Repl. Value 30000 ml/m ² ↓ ↑ Between 3000 and 30000 ml/m ² adjustable in steps of 1000 ml/m ² | Value for the water replenishment rate if the setting <Surface Replen SURF> was selected for the water replen. mode. |
| 1d Jog-cycle replenishment developer - fixer (Menu Service settings→ Replenishment→ Jog Repl. Mode) | Jog Replenishm Auto | Jog Replenishm. Auto ↓ ↑ Jog Replenishm. ON ↓ ↑ Jog Replenishm. OFF | When the machine is switched on the film to be processed is calculated based on the values of the last work day. If this value is below 3 m ² the jog-cycle is activated automatically, otherwise deactivated. The amount set in the SERVICE program (see 1e) is replenished every hour. Jog replenishment is switched off. |
| 1e Developer jog-cycle rate (Menu Service settings→ Replenishment→ Jogdev. Replval. Fixer (Menu Service settings→ Replenishment→ JogFix Replval.) | Jog Dev. Repl. 100ml/h Jog Fix. Repl. 100ml/h | Jog Dev. Repl. Xxx ml/h Adjustable between 50 and 200ml/h in steps of 50ml/h ↓ ↑ Jog Fix. Repl. Xxx ml/h | If <Jog Replenishm.ON> has been set, the amount to be replenished for developer and fixer can be entered. |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|---|--|--|
| 2 Motor drive during processor STANDBY (Menu Service settings → Drive on Mode) | <div>Drive ON Mode CONTINUOUS</div> | <div>Drive ON Mode CONTINUOUS</div> <div>↓ ↑</div> <div>Drive ON Mode FILM</div> | Activate / deactivate the main drive during processor STANDBY The drive motor runs with 0.5 m/min during processor STANDBY Drive motor only runs during film process time, then STOP |
| 3a Level sensor of developer disposal tank connected? (Menu Service Settings → Dev Waste Cond) | <div>Devel.Waste cond Yes</div> | <div>Devel.Waste cond Yes</div> <div>↓ ↑</div> <div>Devel.Waste cond No</div> | Check if the developer disposal tank is connected. |
| 3b Level sensor of fixer disposal tank connected? (Menu Service Settings → Fix Waste Cond) | <div>Fixer Waste conn? Yes</div> | <div>Fixer Waste conn? Yes</div> <div>↓ ↑</div> <div>Fixer Waste conn? No</div> | Check if the fixer disposal tank is connected. |
| 4 E.O.S. fix device connected? (Menu Service Settings → EOS Fix Cond) | <div>EOS Wash/Fix conn.? No</div> | <div>EOS Fix conn.? No</div> <div>↓ ↑</div> <div>EOS Fix conn.? Yes</div> | Check if an E.O.S. fix device is connected. |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|----------------------------|--|--|
| 5 Level signal mixer connected? (Menu Service Settings→ Mixer Cond) | Mixer conn.? No | Mixer conn.? No ↓ ↑ Mixer conn.? Yes | Check if the level signal generator mixer is connected. |
| 6 Level sensor supply tanks (Menu Service Settings→ DevFix SuppCond) | Dev/Fix Repl Tnk conn.? No | Dev/Fix Repl Tnk conn.? No ↓ ↑ Dev/Fix Repl Tnk conn.? Yes | Check if the level sensors of the replenisher tanks are connected. |
| 7 Level sensor anti-algae tank (Menu Service Settings→ Algcid SuppCond) | Algicide Tank conn.? No | Algicide Tank conn.? No | Not active |
| 8a Automatic water tank drain due to algae (Menu Service Settings→ Water Drain→ Wat.Drain Mode) | Water Drain On | Water Drain On ↓ ↑ Water Drain Off | Activate / deactivate the automatic water tank draining (and refill) for 24h-systems, to prevent algae growth. |
| 8b Setup of time for water tank draining (Menu Service Settings→ Water Drain→ Wat. Drain Time) | Water Drain Time 2:00 | Water Drain Time 2:00 ↓ ↑ Water Drain Time hh:mm | Setting for water tank draining time. • DEFAULT: 02:00 h • On time can be set. |

| | SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|-----|--|------------------------------|---|--|
| 9 | Function of the exhaust fan in processor standby (Menu Service Settings→ExhaustFan Mode) | ExhaustFan FILM | ExhaustFan FILM ↓ ↑ ExhaustFan CONTINUOUS | FILM: “Half-capacity” in processor standby, full capacity during film cycle. CONTINUOUS: Exhaust fan runs permanently with full capacity. |
| 10a | Control panel lock (Menu Service Settings→Keys→Key Lock) | Key Lock NO | Key Lock NO ↓ ↑ Key Lock YES Adjustment range: 1- 13 dryer steps | Restricted operation possibilities of the Settings menu. The customer can only set the dryer steps. |
| 10b | Return to the operation program Timeout (Menu Service Settings→Keys→TimeoutNoKey) | Timeout NoKey 300 seconds | Timeout NoKey xxx seconds Adjustable between 0 and 3600 s in steps of 5 s | Set time after which the system returns automatically from the SERVICE program into the operation program. Modified DEFAULT settings are not saved! |
| 11 | Buzzer (Menu Service Settings→Buzzer) | Buzzer ENABLE | Buzzer ENABLE ↓ ↑ Buzzer DISABLE | Activates the buzzer. Deactivates the buzzer. There is no buzzer signal, neither for keystrokes nor for error messages. |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|---------------------------------|---|--|
| 12a Switch on service / maintenance indicator (Menu Service Settings→ Maintenance→ Service Indic.) | ServiceIndicat. ON | ServiceIndicat. ON ↓ ↑ | Activates the service interval indication for the customer. Once the SERVICE interval has elapsed, the customer is informed about the need of maintenance during the first 3 films after switching on. |
| | | ServiceIndicat. OFF | Deactivate. |
| 12b Set the SERVICE intervals per year (Menu Service Settings→ Maintenance→ Service Interv.) | ServiceInterval 2 times/year | ServiceInterval 2 times/year ↓ ↑ | Set the SERVICE interval. The interval is only displayed in case of an activated service/ maintenance system. |
| | | ServiceInterval x times/year Adjust 2, 3, or 4 times/year | |
| 12c RESET (Menu Service Settings→ Maintenance→ Reset ServIndic.) | ResetServIndic No | ResetServIndic No ↓ ↑ | The “Service” display is deleted. |
| | | ResetServIndic YES | SERVICE intervals are set on counter level “0”. The current data is saved. |
| <div> After an installation always execute a RESET. So the interval starts at the time of the installation.</div> | | | |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|--------------------------------|---|---|
| 13 Set Date/Time (Menu Service Settings → Set Date/Time) | - No preset values | Date:DD.MM.YYYY Time: hh:mm Enter DD, confirm and use the   keys to move to the next value. | Set date and time DD = day MM = month YYYY = year hh = hour mm = minutes |
| 14 Cleaning mode (Menu Service Settings → Cleaning Mode) | - No preset values | Cleaning Mode ###..... After 30 minutes <cleaning Mode finished> is displayed. Press  to exit the <Cleaning Mode> | Activates the cleaning mode. Drive motor runs, developer and fixer are heated to 39°C, circulation pumps are running. The replenisher pumps are not triggered. |
| 15 Simulation (demo) of film processor (Menu Service Settings → Demo Mode) | Demo Mode OFF | Demo Mode OFF   Demo Mode ON | Switch off demo mode. Demo mode without function of pumps, dryer, level sensor, heater and cross flow fan. Only the drive system runs. |
| 16 Process mode (Menu Service Settings → Process Mode) | Curix | New Mode:Curix Yes No The applications CURIX, MAMMO, FUJI-STANDALONE, FUJI- I/F DOCKING and LR3300 can be selected | Selection of the application After modification of the application a machine reset with BASEINIT is executed! |
| 17 Quick Display (Menu Service Settings → Quick Display) | - No preset values | | Overview over all settings in the Service Settings |

9.9.11

DEFAULT settings ex factory / after BASEINIT

| DEFAULT Values | |
|------------------------------------|-----------------------|
| Start replenishment | No |
| Water replenishment | CONT |
| Jogcycle replenishment | AUTO |
| Drive on Mode | CONTINUOUS |
| Language | ENGLISH |
| EOS Fix Cond | NO |
| Mixer Cond | NO |
| Water drain Mode | ON |
| Exhaust Fan | FILM |
| Key Lock | NO |
| Buzzer | ENABLE |
| Service indication | ON |
| Service interval | 2 |
| Process | 2 min (RP) |
| DEV temperature | 34°C |
| Dryer step | process dependent |
| Timeout Nokey | 300 sec |
| DEV replenishment rate | 400 ml/m ² |
| FIX replenishment rate | 400 ml/m ² |
| WAT replenishment rate | 30 l/h |
| Jogcycle DEV replenishment rate | 100 ml/h |
| Jogcycle FIX replenishment rate | 100 ml/h |

9.9.12

Processes

| Application | HT | IP | RP | EXT |
|------------------|-----|-----|------|------|
| Curix | 60s | 90s | 2min | - |
| Mammo | 60s | 90s | 2min | 3min |
| FUJI Standalone | 60s | 90s | 2min | - |
| FUJI I/F Docking | 60s | 90s | 2min | 3min |
| LR3300 | 60s | 90s | 2min | - |

HT **H**igh **T**hroughput
IP **I**ntermediate **P**rocessing
RP **R**apid **P**rocessing
EXT **E**xtended

9.9.13

Process data

The film is developed according to the selected process type (HT, IP, RP, EXT*):

| Process data/time | HT (60s) | IP (90s) | RP (2min) | EXT (3min) |
|--|---|----------------------------|--------------------------|---------------------------|
| Process speed | 160 cm/min 62.99 in/min | 106 cm/min 41.73 in/min | 80 cm/min 31.5 in/min | 52 cm/min 20.47 in/min |
| Standard DEV temperature (range: 25-39°C/ 77-102°F) | 38°C (100°F) | 36°C (96.8°F) | 34°C (93°F) | 34°C (93°F) |
| Standard FIX temperature Fixer 2: | 34°C (93°F) | | | |
| Warm-up time | approx. 20 min | | | |
| Dryer setting (range: 1 to 13). | 7 | 5 | 5 | 5 |
| Replenishment cycle | 0.25 m ² 3.88 in ² | | | |
| Water supply | 3000 ml/min (101.45 fl.oz/min) | | | |
| Water pressure range min. max. | 2 bar 6 bar | | | |
| Water conductivity value | min. 3 µS/cm | | | |

9.9.14

Application dependent process parameter

| Application (ml/m ²) | | CURIX | MAMMO | FUJI Stand Alone | FUJI I/F Docking | LR3300 |
|---|-----|-------|-------|------------------------|---------------------|--------|
| Developer replenishment rate DEFAULT settings | | 400 | 400 | 400 | 400 | 600 |
| Range | min | 50 | 50 | 50 | 50 | 50 |
| | max | 1200 | 1200 | 800 | 800 | 800 |
| Fixer replenishment rate DEFAULT settings | | 400 | 600 | 400 | 400 | 600 |
| Range | min | 50 | 50 | 50 | 50 | 50 |
| | max | 1200 | 1200 | 800 | 800 | 800 |

Section 4

File the operating instructions of the machine in this section.

Chapter 4: Intentionally left blank.

Section 5

explains the machine principle and describes its function in normal conditions.

Furthermore it describes the structure and function of individual assemblies.

Chapter 5

Contents

| | | |
|----------|--|-----------|
| 1 | General..... | 1 |
| 2 | Film Transport Diagram..... | 3 |
| 3 | Functional Differences..... | 4 |
| 3.1 | Differences according to type numbers | 4 |
| 3.2 | Differences according to serial numbers | 4 |
| 4 | Functional Sequences | 6 |
| 4.1 | Switch-on cycle | 6 |
| 4.2 | Flow chart of the switch-on cycle | 7 |
| 4.2.1 | Initialization and start phase..... | 8 |
| 4.2.2 | Filling phase | 11 |
| 4.2.3 | All tank levels reached | 13 |
| 4.2.4 | Heating phase | 14 |
| 4.3 | Film drive | 18 |
| 4.4 | Flow chart of the film drive | 19 |
| 4.4.1 | Start of film cycle..... | 20 |
| 4.4.2 | Film processing | 21 |
| 4.4.3 | Film drying..... | 22 |
| 4.4.4 | Film transport into the film chute | 23 |
| 5 | Individual Functions | 24 |
| 5.1 | Water supply | 24 |
| 5.1.1 | Filling phase: Water tank empty detection | 24 |
| 5.1.2 | Water supply during film cycle: | 25 |
| 5.2 | Developer / fixer replenishment | 26 |
| 5.3 | Automatic water tank draining / algae prevention | 28 |
| 5.4 | Jog cycle: developer / fixer replenishment per hour..... | 29 |
| 5.5 | Solution circulation; function of the synchro-motor pumps | 30 |
| 5.6 | Control of the developer heater | 31 |
| 5.7 | Control of the fixer heater..... | 31 |
| 5.8 | Control of the dryer | 32 |
| 5.8.1 | Dryer test during heating phase | 33 |
| 5.8.2 | Dryer control during film cycle..... | 34 |

| | | |
|-------------|---|-----------|
| 5.8.3 | Table: Delay times of the IR-heaters depending on the process | 35 |
| 5.8.4 | Error messages of the dryer control | 35 |
| 5.8.5 | Dryer step setting | 36 |
| 5.9 | Transformer | 38 |
| 5.10 | Drive motor | 38 |
| 5.11 | Temperature measuring..... | 39 |
| 5.12 | Level detection | 39 |
| 5.13 | Current sensor..... | 39 |
| 5.14 | Power failure..... | 39 |
| 5.15 | Data saving | 40 |
| 6 | Roller Diagram..... | 41 |
| 6.1 | Classic E.O.S. (Type 5270/100)..... | 41 |
| 6.2 | Classic E.O.S. CL (Type 5270/105)..... | 42 |

1

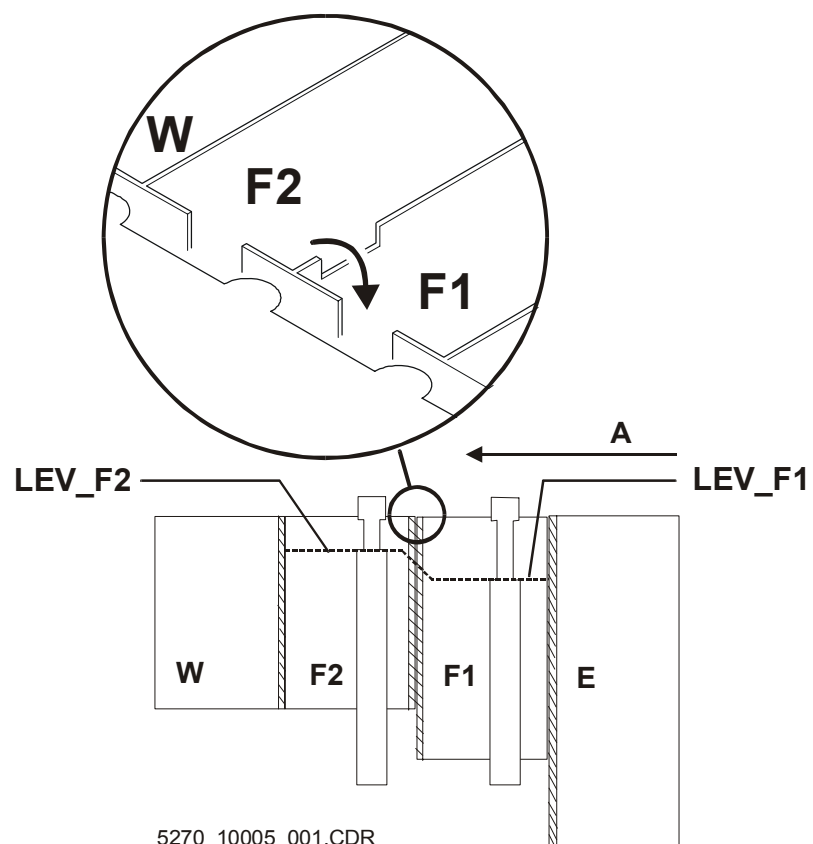
General

The Classic E.O.S. (Classic E.O.S CL) is a film processor for medical x-ray films.

It implements the EOS technology (Ecologically Optimized System) – a double fixer tank system, which reduces considerably the silver carry-over into the water tank.

Technical functions between the fixer tanks

Fixer tank 1 (F1) and fixer tank 2 (F2) are connected via an opening at the upper edge of the intermediate wall. In fixer tank 1 (F1) the film is almost completely fixed, compared to fixer tank 2 (F2) the silver concentration is quite high.



5270_10005_001.CDR

Figure 1

| | | | |
|-----------|--------------------------|---------------|---------------|
| A | Film transport direction | W | Water tank |
| E | Developer tank | LEV_F1 | Level fixer 1 |
| F1 | Fixer tank 1 | LEV_F2 | Level fixer 2 |
| F2 | Fixer tank 2 | | |

Fresh fixer is added to tank F2 and is heated. The higher fixer level in tank F2 spills over into tank F1 through the opening in the intermediate wall. At the same time the same amount of fixer is drained via the F1 tank drain.

The tank circulation mixes the fresh fixer with the fixer solution in tank F1.

This circulation provides for an even temperature distribution in the fixer.

The fixing process with two tanks reduces the silver concentration in the second tank, and less silver is carried over into the water tank.

In case of a standard water supply of 3 l/min the remaining silver concentration in the water drained through the water tank overflow is less than 1 ppm.

2

Film Transport Diagram

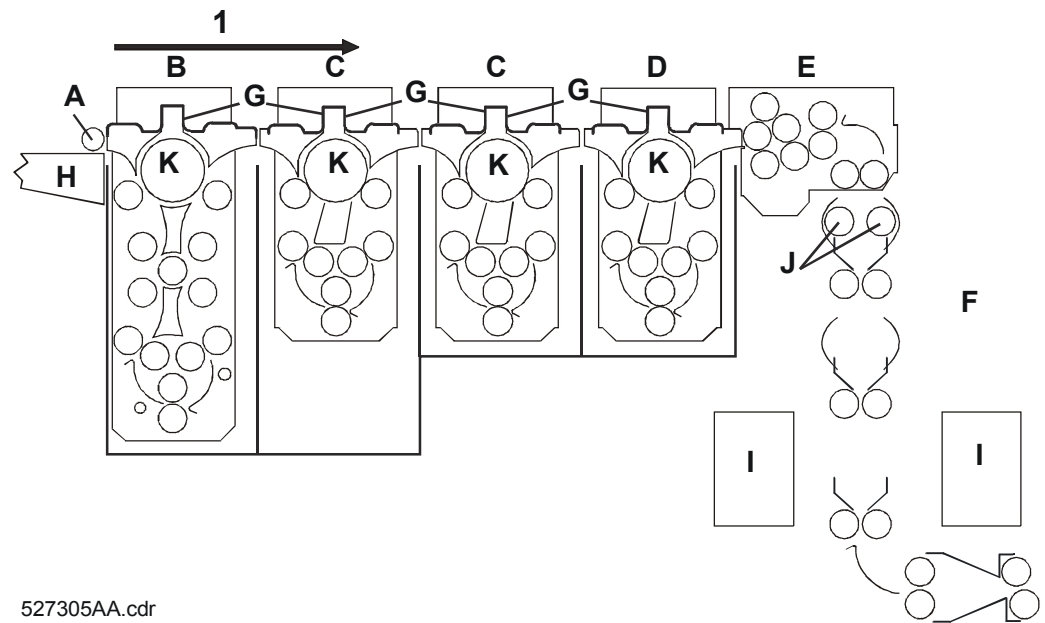


Figure 2

Film handling:

| | | | |
|----------|--------------------------|----------|---|
| 1 | Film transport direction | F | Dryer |
| A | Film scanner rollers | G | Upper rack guides (crossovers) |
| B | Developer tank + rack | H | Film feed table (only for type 5270/100) |
| C | Fixer tank 1, 2 + rack | I | Dryer: Cross flow fan / convection heater |
| D | Water tank + rack | J | Dryer: IR-heaters |
| E | Distribution rollers | K | Racks: Central roller / main rack drive |

- The film is inserted via the feed table (H) and is then pulled into the machine over magnetic rollers. The magnetic rollers scan the film size.
- The transport rollers of the film processor transports the film through the developer tank (B), the fixer tanks 1 and 2 (C), the water tank (D) and the dryer (F).
- Replenisher pumps meter the supply of fresh developer and fixer solution to the tanks (B, C). The water tank (D) is supplied directly by the water installation system. Exhausted chemicals are collected in external tanks, waste water is drained into the sewer system. The amount of replenished chemicals is based on the processed amount of film and the PROCESS application.

3

3.1

Functional Differences**Differences according to type numbers**

The Classic E.O.S Type 5270/100 is a film processor with standard racks.

The film processor Classic E.O.S CL Type 5270/105 has been designed for connection with the Laser Imager 3300.

The differences of the Classic E.O.S CL Type 5270/105 and the Classic E.O.S Type 5270/100 are:


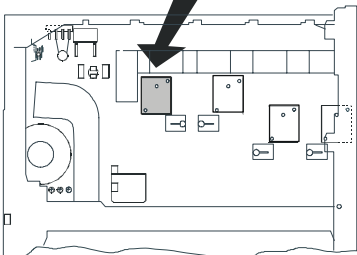
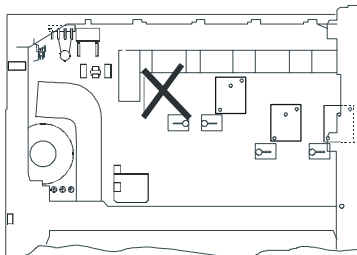
- Instead of a feed table the machine has a docking unit for connection with the Laser Imager 3300.
- The control panel is located on the side of the machine.
- 24 V replenisher pumps for developer and fixer.
- “Autofill” – function for the replenisher tanks integrated.

3.2

Differences according to serial numbers

Only downward compatible ←

→ Only upward compatible

| Differences | Type 5270/100 <SN4500 Type 5270/105 <SN1500 | Type 5270/100 ≥SN4500 Type 5270/105 ≥SN1500 |
|---|---|--|
| Control Board PCB1 | F8.5270.7750._ / F8.5270.7950._ (Label on PCB1, no part number!) Compatible with the software versions CEOS 1303-1801, MEOS 1201-1401 and EOSUNIV1007 | F8.5270.7890._ (Label on PCB1, no part number!) Compatible with Software Version CLLC 1107 |
|  | Only the software versions CEOS1303-1801, MEOS 1201-1401, and ESOUNIV1007 must be installed on Control Board F8.5270.7890._! | Only software version CLLC 1107 and higher must be installed on Control Board F8.5270.7750._ and/or F8.5270.7950._! |
| Water circulation pump OM4 | OM4 Standard  | OM4 Option  5273_10005_001.cdr |
| Cross flow fan | 24V | 230V |
| Level sensors in fixer tanks | Level sensor only in fixer tank 1 | Level sensor in fixer tank 1 and 2 |

Only downward compatible

| Differences | Type 5270/100 <SN4500 Type 5270/105 <SN1500 |
|------------------|--|
| Dryer triggering | 10 dryer steps 8 Power levels |

Only upward compatible

| Type 5270/100 ≥SN4500 Type 5270/105 ≥SN1500 |
|--|
| 13 dryer steps 10 Power levels |

4

4.1

Functional Sequences

Switch-on cycle

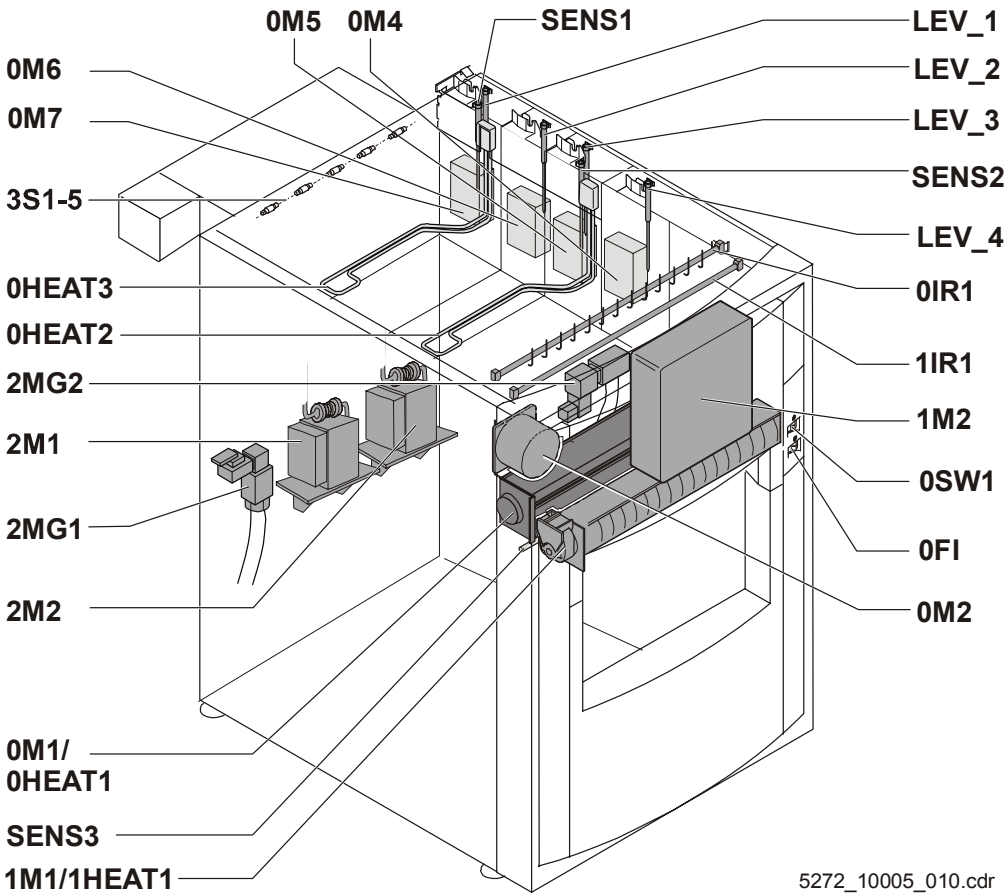


Figure 3

0 = basic machine **1** = dryer flap **2** = base **3** = darkroom feed table

| | | | |
|--------------|--------------------------------------|----------------------|------------------------------|
| 0SW1 | Film processor mains switch | 0HEAT1/1HEAT1 | Convection heaters |
| 0FI | GFCI switch | 0M1/1M1 | Dryer fan |
| 2MG1 | Solenoid valve water supply | 0HEAT3 | Heater developer |
| 2MG2 | Solenoid valve water drain | 0HEAT2 | Heater fixer 2 |
| 2M1 | Dev replenisher pump (Type 5270/100) | 1M2 | Exhaust fan |
| (2M3) | Dev replenisher pump (Type 5270/105) | 0IR1/1IR1 | IR-heaters |
| 2M2 | Fix replenisher pump (Type 5270/100) | SENS1 | Developer temperature sensor |
| (2M4) | Fix replenisher pump (Type 5270/105) | SENS2 | Fixer 2 temperature sensor |
| 0M2 | Drive motor | SENS3 | Dryer temperature sensor |
| 0M4 | Water circulation pump | LEV_1 | Developer level sensor |
| 0M5 | Fixer 2 circulation pump | LEV_2 | Fixer 1 level sensor |
| 0M6 | Fixer 1 circulation pump | LEV_3 | Fixer 2 level sensor |
| 0M7 | Developer circulation pump | LEV_4 | Water level sensor |
| 3S1-5 | Magnetic film detection rollers | | |

4.2

Flow chart of the switch-on cycle

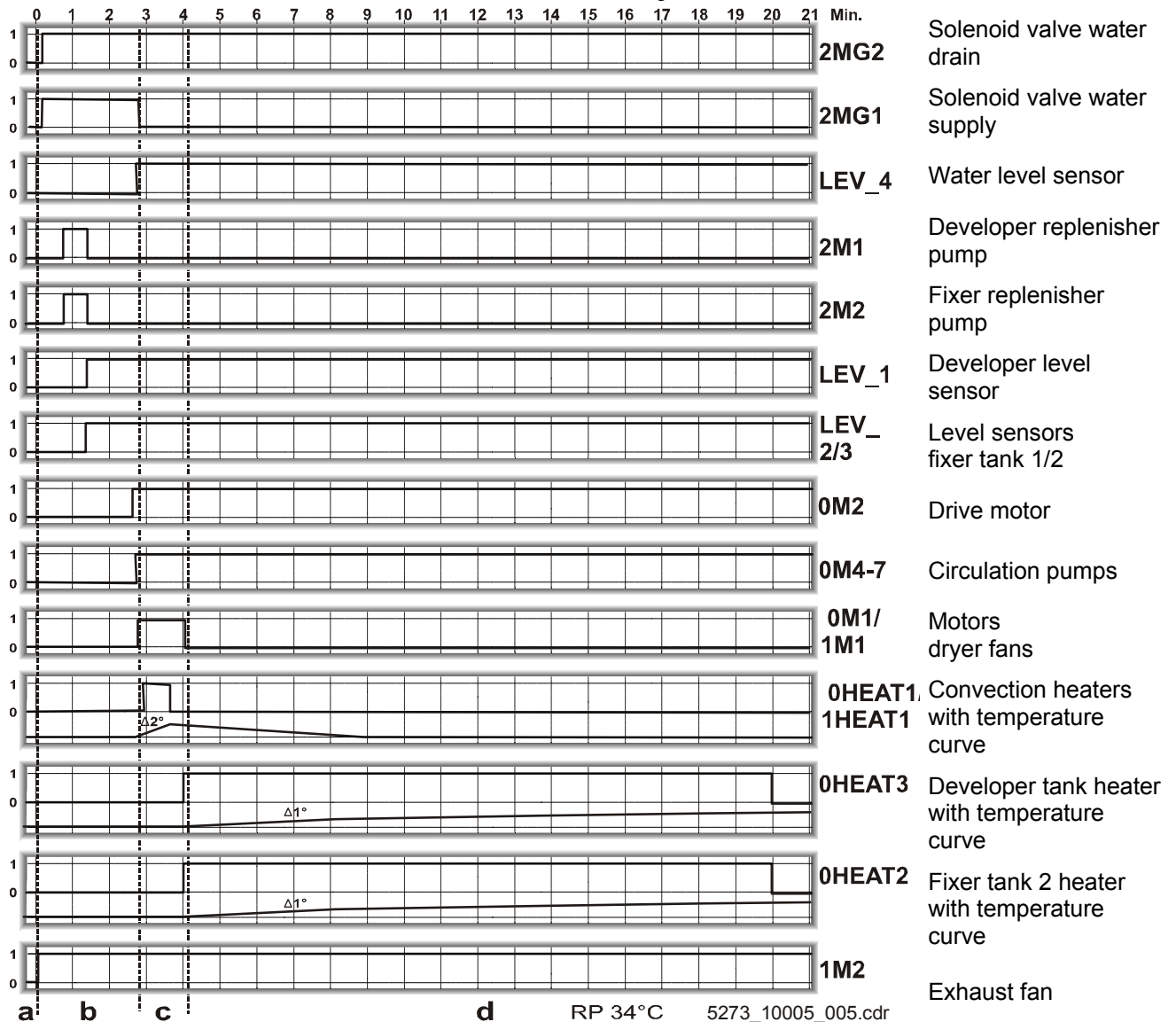


Figure 4

a Initialization and start phase (see Section 4.2.1)

b Filling phase (see Section 4.2.2)

c Levels reached (see Section 4.2.3)

d Heating phase (see Section 4.2.4)

Motors: 1 Triggering, motors ON
0 Motor OFF

Heaters: 1 active
0 not active

Sensors: 1 active
0 not active

4.2.1 Initialization and start phase

After switching on the machine (GFI switch 0F1 and mains switch 0SW1 on) the system will be initialized. At first all consumers are off.

- The machine executes a RESET (no BASEINIT).
- All process data is set.
- All data in the EEPROM (also customer specific data) is kept.
The control panel is loaded.

After the initialization in the starting phase, the following functions will be checked:

4.2.1.1 After switching on

- **Calibration of the replenishment rates after machine installation:**
Internal check if developer and fixer replenishment rates have been calibrated.

If they are not, a display request the calibration:

| |
|----------------------------------|
| Cal Dev Pump goto Test/Adjust |
|----------------------------------|

or

| |
|----------------------------------|
| Cal Fix Pump goto Test/Adjust |
|----------------------------------|

or

| |
|-------------------------------------|
| Cal Dev and Fix goto Test/Adjust |
|-------------------------------------|

If the replenishment rates for developer and fixer have not been calibrated, drive motor 0M2 will not start.

EMERGENCY FILM processing is not possible!

The machine will not switch to the filling / heating phase!

After the “**First calibration**” procedure was made (during the installation) this check is only repeated in the following **repair cases**:

- Replacement of Control Board PCB1
- Replacement of clock chip IC52

4.2.1.2

Mixer connected? (Option)

Internally the Mixer function is checked, provided a Mixer is connected, and has been activated in the service program

<Service Settings> → <Mixer cond>

If the Mixer level is too low the display reads:

| |
|------------------------|
| <p>CHECK MIXER</p> |
|------------------------|

And the respective replenisher pump will not be triggered if a replenisher tank is empty. The machine rejects film feed.

EMERGENCY FILM processing not possible!

4.2.1.3

EOS Wash/Fix connected? (Option)

Internally the correct function of the EOS Wash/Fix is checked, provided the unit is connected assn has been activated in the service program

<Service Settings> → <EOS Fix Cond>

If the function is not OK, the display reads:

| |
|-----------------------------|
| <p>CHECK EOS MODULE</p> |
|-----------------------------|

4.2.1.4 Level sensors of the replenisher tanks connected on the film processor? (Option)

Internally the system checks if the replenisher tanks of developer and fixer are full, provided the sensors are connected and have been activated in the service program

<Service Settings> → <Dev Fix Suppcond>

In case of empty replenisher tanks the display reads:

| |
|--------------------------|
| DEV REPLEN TANK EMPTY |
|--------------------------|

or

| |
|--------------------------|
| FIX REPLEN TANK EMPTY |
|--------------------------|

And the respective replenisher pump will not be triggered if a replenisher tank is empty. The machine rejects film feed.

EMERGENCY FILM processing not possible!

4.2.1.5 Level sensors of the disposal tanks connected on the film processor? (Option)

Internally the system checks if the disposal tanks for developer and fixer are full. If they are full the display reads:

| |
|--------------------|
| WASTE TANK FULL |
|--------------------|

If a disposal tank is full, the respective replenisher pump will not be triggered and the water supply solenoid valve 2MG1 will be closed. EMERGENCY FILM processing is possible!

4.2.1.6 Anti-algae unit connected on the film processor? (Option)

Internally the system checks if the level of the anti-algae unit is sufficient and has been activated in the service program

<Service Settings> → <Algcid Suppcond>

If the level is too low the display reads:

| |
|---------------------|
| CHECK ANTI - ALG |
|---------------------|

4.2.2**Filling phase**

4.2.2.1

Filling developer and fixer tanks

- The levels in the film processor tanks are checked.
- The levels of the supply and disposal tanks are checked. If the supply tanks are empty or the disposal tanks are full, the developer tank will not be filled.
- If the level in the tanks has dropped, the replenisher pumps for developer 2M1 and fixer 2M2 will be switched on. The tanks are filled until the level sensors LEV_1, LEV_2, and LEV_3 react or until a maximum of 1200 ml each has been supplied. If a level cannot be reached the following error messages will be displayed:

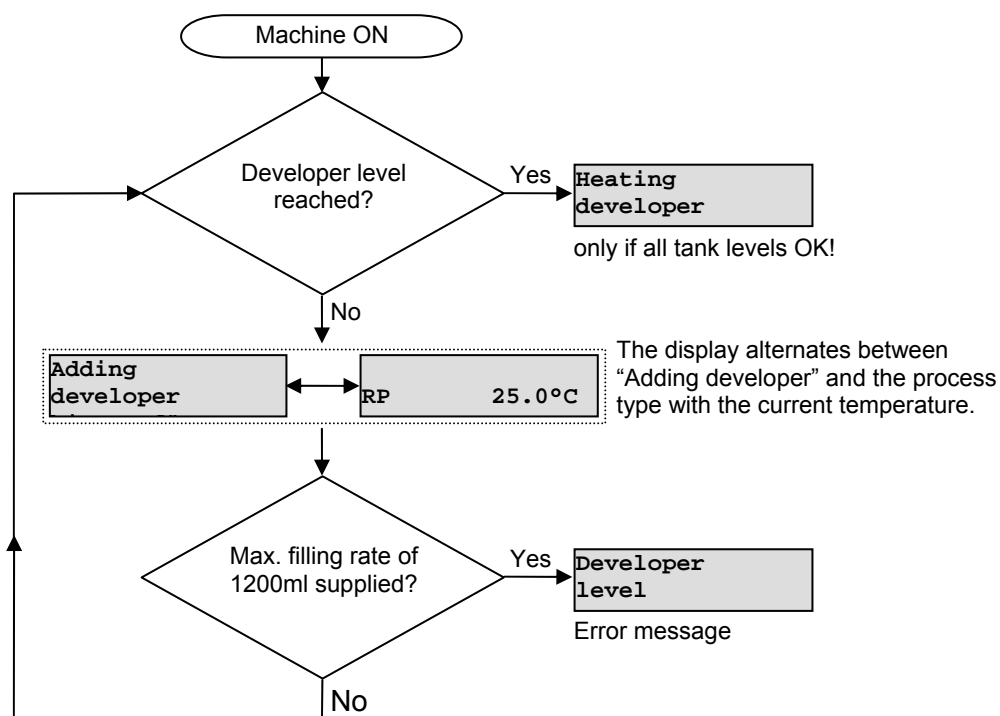
**Developer
Level**

or

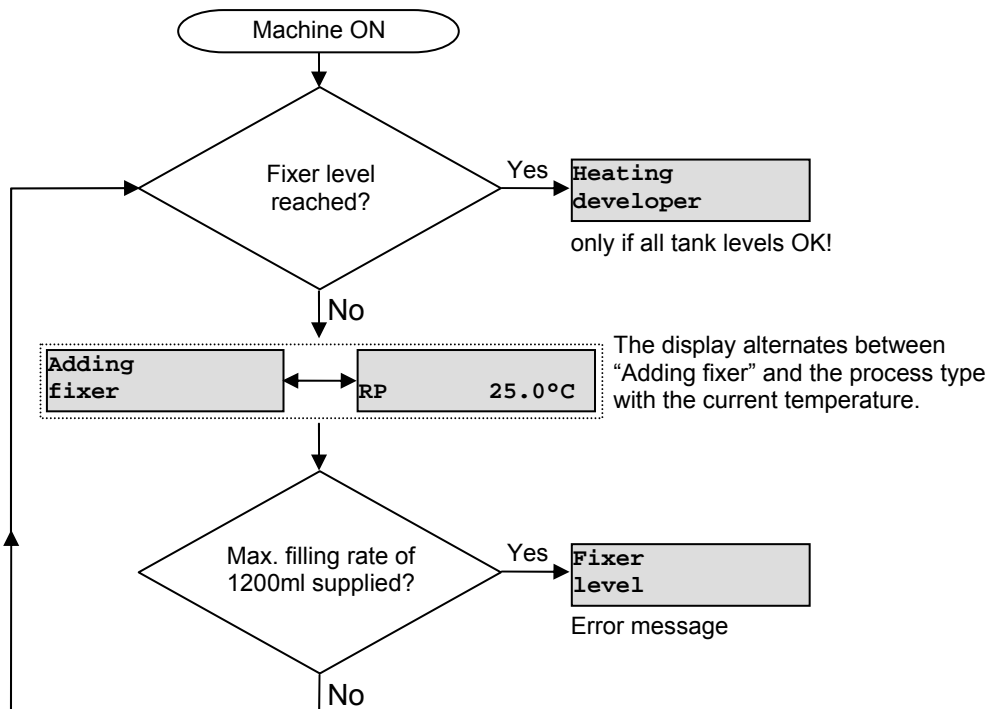
**Fixer
Level**

and the switch-on cycle is interrupted.

Flow chart for the developer tank filling:



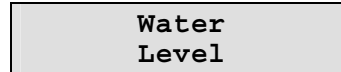
Flow chart for the fixer tank filling:



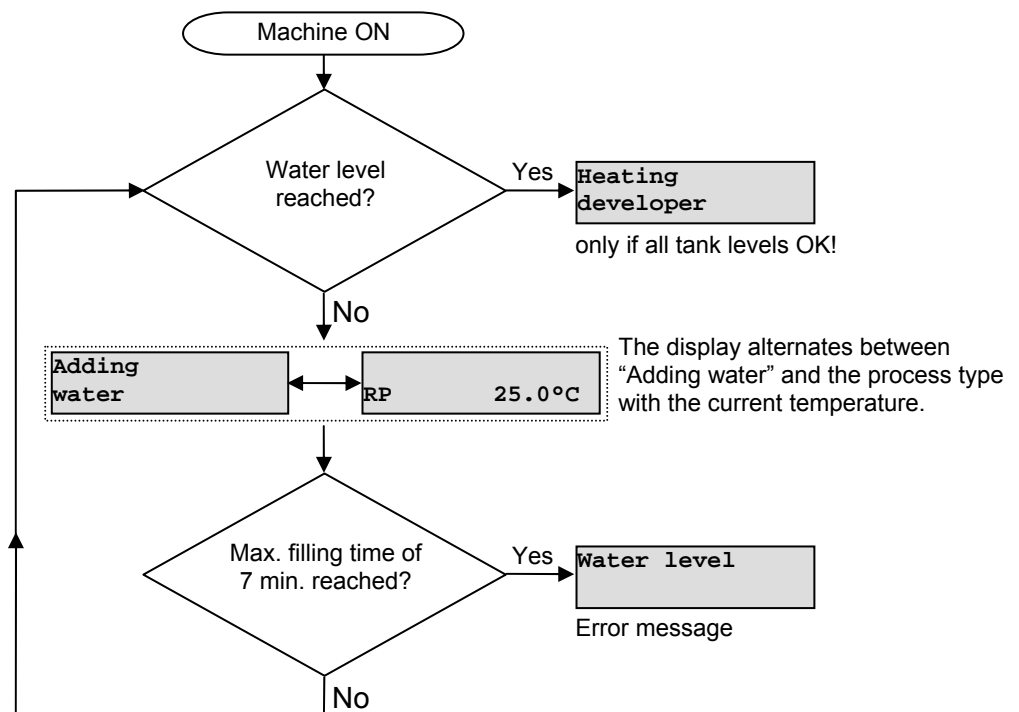
4.2.2.2

Filling the water tank

If the water level is too low the water supply solenoid valve 2MG1 opens. Once the water level sensor LEV_4 detects a full water tank, the water supply solenoid valve 2MG1 is closed after a delay of 5 seconds. If it was not possible to reach the water tank level within 7 minutes the error message



will be displayed and the switch-on cycle is aborted. The switch-on cycle must be repeated after the problem has been solved (e.g. by opening the water tap) by switching the film processor off and on again.

Flow chart for the water tank filling function:

4.2.3

All tank levels reached

- All circulation pumps – developer 0M7, fixer1 0M6, and fixer2 0M5 switch on.
- Drive motor 0M2 starts at 41 rpm (corresponds to 0.5 m/min of film transport speed).

4.2.4

Heating phase

Developer and fixer heaters will only be switched on after the levels in developer, fixer, and water have been reached. The temperature indicated on the machine display always refers to the temperature in the developer.

- The cross-flow fans (dryer fans) 0M1/1M1 are triggered.
- The convection heaters 0HEAT1/ 1HEAT1 are switched on in addition.
- After 30 seconds the temperature must have increased by at least 2°C (measured by the dryer temperature sensor SENS3). Otherwise the cross flow fan and the convection heaters switch off, (error message Service 505).
- After the functional check the convection heaters switch off again.
- The cross flow fans run for about another 30 seconds (delay).
- Afterwards, Control Board PCB1 triggers the heaters in the developer/fixer tanks, but only if the respective solution level in the developer/fixer tanks has been reached.
- The temperature increase in the solutions is monitored during the heating phase. If the temperature increases less than 1°C within a period of 4 minutes, the following messages will be displayed:

Service 502

(developer temperature too low)

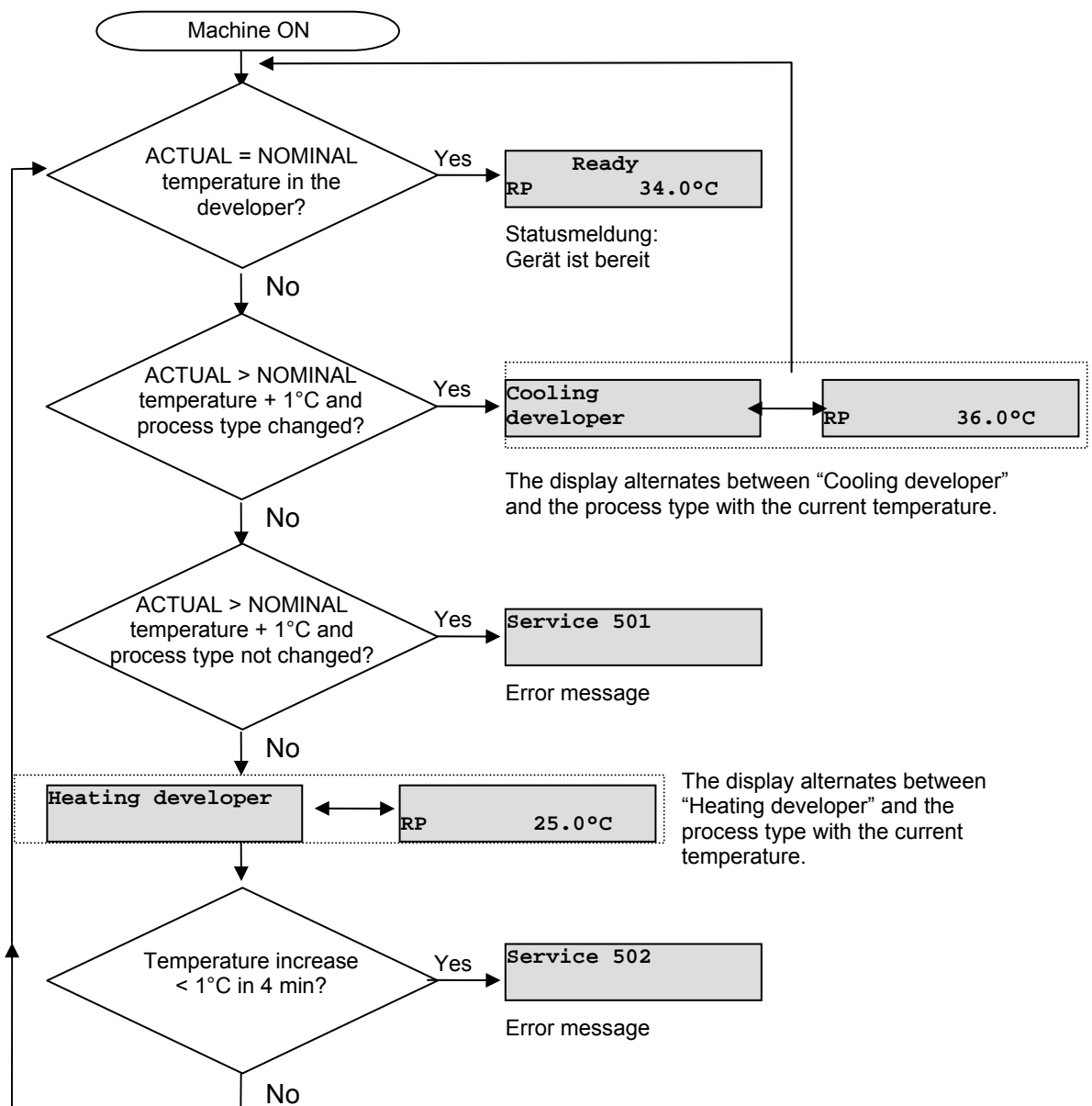
and/or

Service 504

(fixer temperature too low)

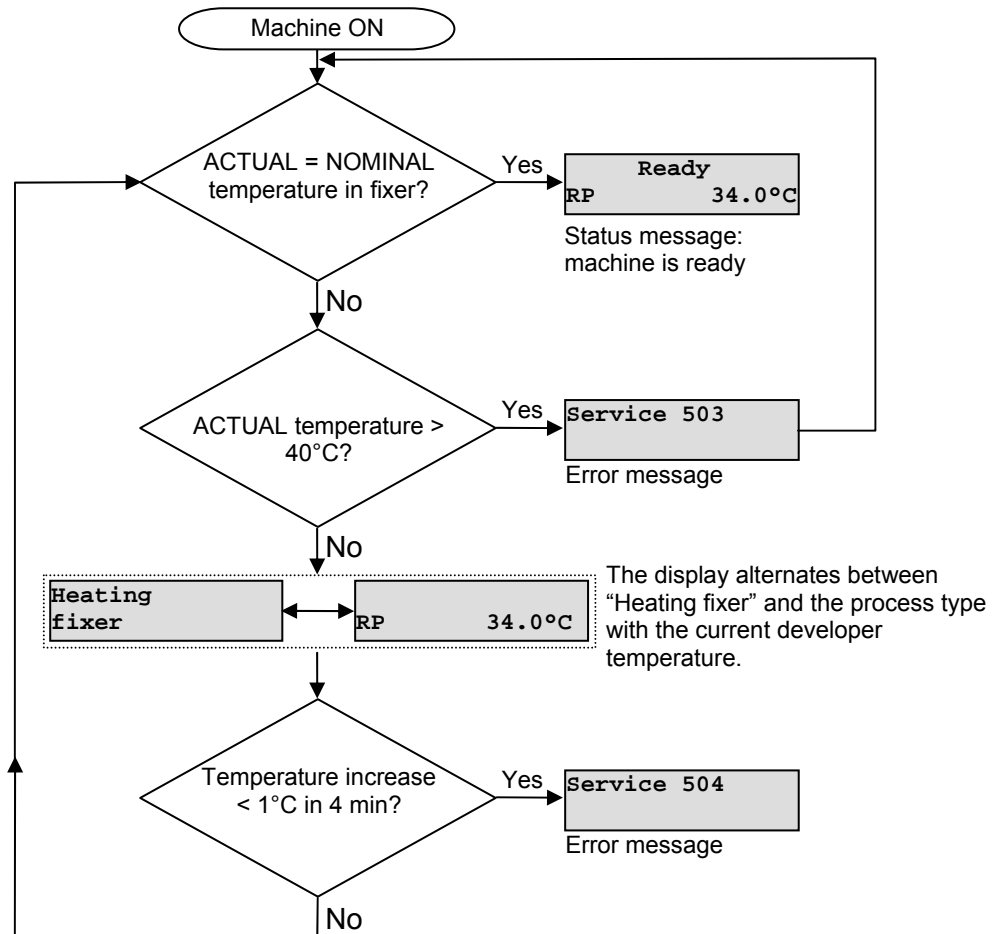
4.2.4.1

Flow chart of the developer heating function:



4.2.4.2

Flow chart of the fixer heating function:



4.2.4.3

Temperature control for developer / fixer heating

Developer:

The heating phase in the developer ends when the ACT temperature deviates by less than 0.5°C from the NOM temperature.

Display:

| | |
|-------|-------|
| Ready | |
| IP | 36 °C |

Temperature regulation:

Heater OFF: ACT dev. temp. = NOM dev. temp.

Heater ON: ACT dev. temp. below NOM dev. temp.
(ACT dev. temp. < NOM dev. temp. -0.1°C)

In case of a deviation of -0.1°C to -1.0°C the developer heater will switch on and the machine remains ready for film processing.

- The machine goes back to heating phase (machine not ready), if the ACT temperature is more than 1°C below NOM temperature.

Display for example:

| | |
|----|---------|
| IP | 34.8 °C |
|----|---------|

- If the developer temperature is more than 1°C above the NOM temperature, the display reads:

Service 501

- However, if the reason why the developer temperature is more than 1°C above NOM temperature is a change in the process type (and thus a different NOM temperature) or in the developer temperature, the machine will switch to “cooling phase”.

EMERGENCY FILM processing is possible and the display reads:

Cooling
developer

RP 35.5°C

This display alternates with the status display (newly selected process type and current developer temperature).

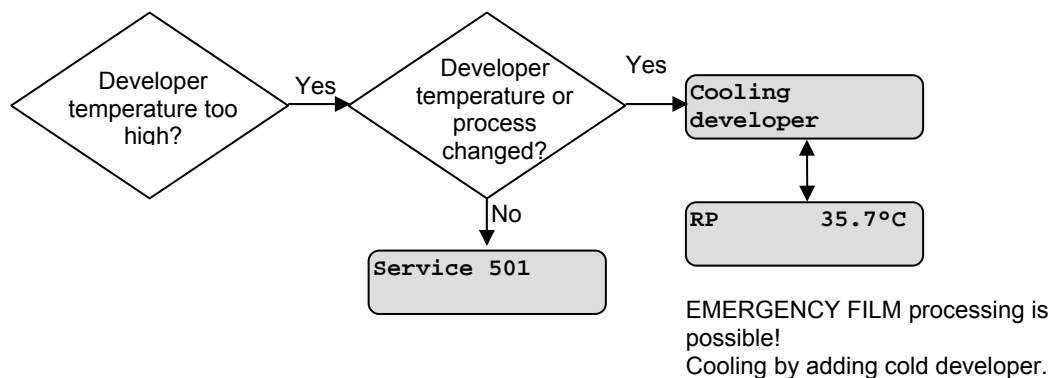
- Fast cooling down is possible:
Carefully pour cold developer of the replenisher tanks into the developer tanks.

Fixer:

- The heating phase ends when the NOM temperature of 34°C has been reached. The machine goes back to heating phase if the ACT temperature in the fixer drops below 30°C.
- If the fixer temperature is above 40°C, the display reads:

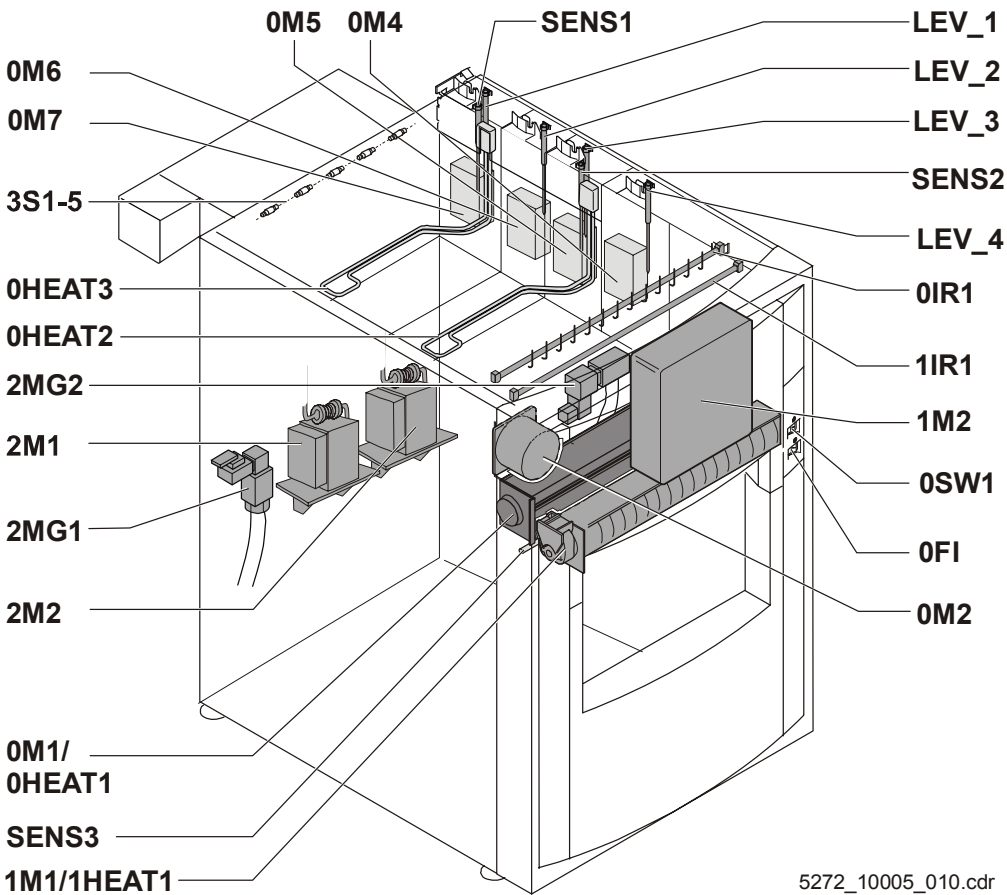
Service 503

Sequence for the developer cooling:



4.3

Film drive



5272_10005_010.cdr

Figure 5

0 = basic machine 1 = dryer flap 2 = base 3 = darkroom feed table

| | | | |
|-------|--------------------------------------|-------------------|------------------------------|
| 0SW1 | Film processor mains switch | 0HEAT1/ 1HEAT1 | Convection heaters |
| 0F1 | GFCI switch | 0M1/1M1 | Dryer fan |
| 2MG1 | Solenoid valve water supply | 0HEAT3 | Heater developer |
| 2MG2 | Solenoid valve water drain | 0HEAT2 | Heater fixer 2 |
| 2M1 | Dev replenisher pump (Type 5270/100) | 1M2 | Exhaust fan |
| (2M3) | Dev replenisher pump (Type 5270/105) | 0IR1/1IR1 | IR-heaters |
| 2M2 | Fix replenisher pump (Type 5270/100) | SENS1 | Developer temperature sensor |
| (2M4) | Fix replenisher pump (Type 5270/105) | SENS2 | Fixer 2 temperature sensor |
| 0M2 | Drive motor | SENS3 | Dryer temperature sensor |
| 0M4 | Water circulation pump | LEV_1 | Developer level sensor |
| 0M5 | Fixer 2 circulation pump | LEV_2 | Fixer 1 level sensor |
| 0M6 | Fixer 1 circulation pump | LEV_3 | Fixer 2 level sensor |
| 0M7 | Developer circulation pump | LEV_4 | Water level sensor |
| 3S1-5 | Magnetic film detection rollers | | |

4.4 Flow chart of the film drive

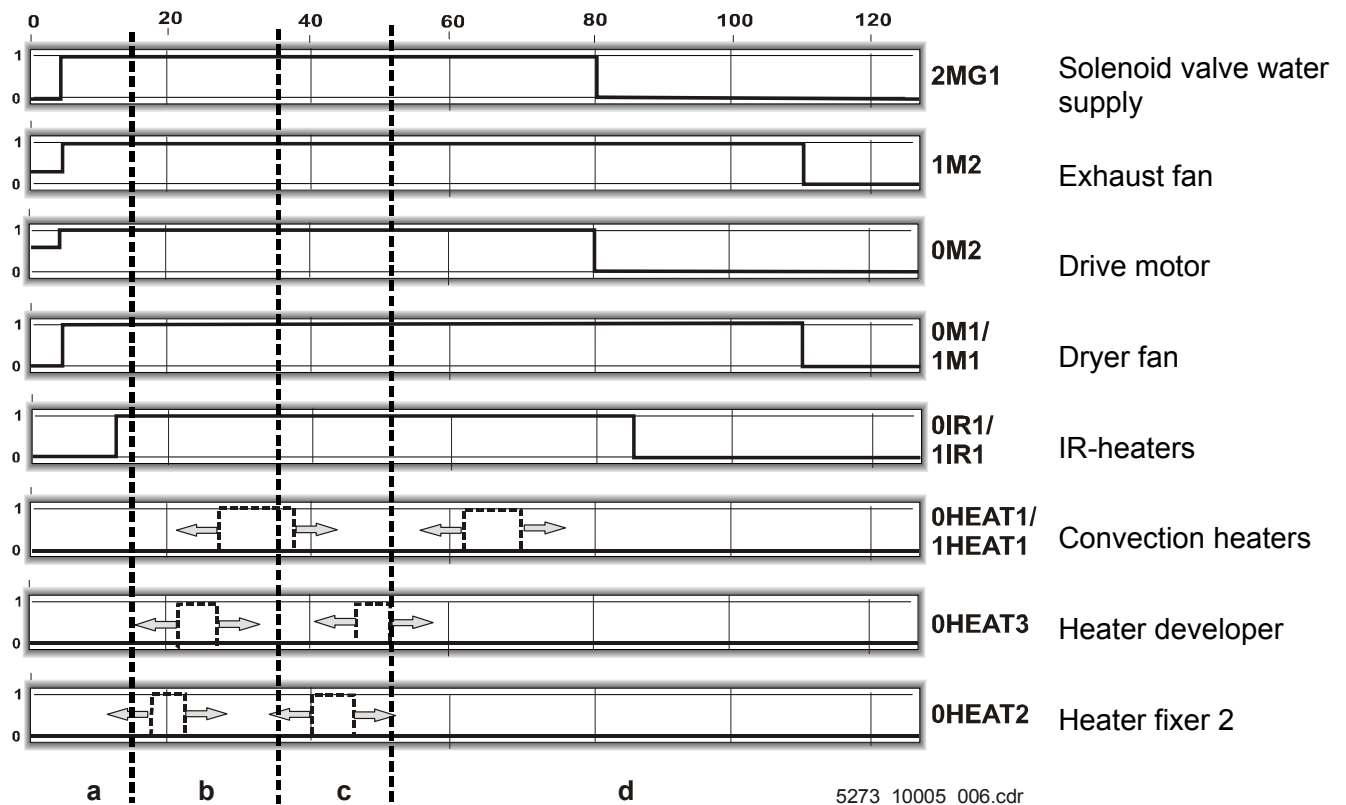


Figure 6

a Start film cycle (see Section 4.4.1)

c Film drying (see Section 4.4.3)

b Film processing (see Section 4.4.2)

d Film transport to film chute (see Section 4.4.4)

Motors: 1 Triggering, motors ON
0 Motor OFF

Sensors: 1 active
0 not active

Heaters: 1 active
0 not active



switch point and time (variable)

4.4.1**Start of film cycle**

4.4.1.1

Standby phase

All conditions for normal film processing are satisfied:

- Levels in developer, fixer, and water tank reached
- NOMINAL temperatures in developer and fixer tanks reached
- Drive motor in permissible speed range, depending on the code
- Mixer / replenisher tanks full
- Disposal tanks empty
- The display reads, for example:

| | |
|----|---------|
| RP | 34.0 °C |
|----|---------|

The operator feeds film via the feed table.

The magnetic roller detection 3S1-5 at the feed table detects the film transport pulses.

4.4.1.2

Sequence of the film feed detection

Within a process dependent time frame at least 3 pulses per magnetic roller must be counted.

If less than 3 pulses per magnetic roller are detected, this is indicated by a signal of

three short buzzer signals = problem in film feed; film transport stopped.
Attention: Film lies on the feed table. Risk of fogging!

If the required number of pulses was counted, the film drive starts.

Permanent film drive starts:

- Drive motor 0M2 for film processing switched on.
- Exhaust fan 1M2 is set to full speed.
- The dryer fans 0M1/1M1 switch on.
- The convection heaters 0HEAT1/1HEAT1 heat up to nominal temperature (temperature sensor SENS3).
- The IR-heaters 0IR1/1IR1 are switched on for 5s with a power of 70V (lowest power setting), even if the code of the dryer setting does not include the IR-heaters.
- Every 0.25 m² of processed film developer and fixer are replenished according to the set replenishment rate.
- The processed amount of film is detected by the pulses of the magnetic rollers.

4.4.1.3

Emergency film cycle

EMERGENCY FILM processing is only possible when all LEVELS have been reached. Once the tanks have been filled, the machine is ready for emergency film during the heating phase.

If a film is fed in this phase the display reads:

EMERGENCY FILM
PLEASE WAIT

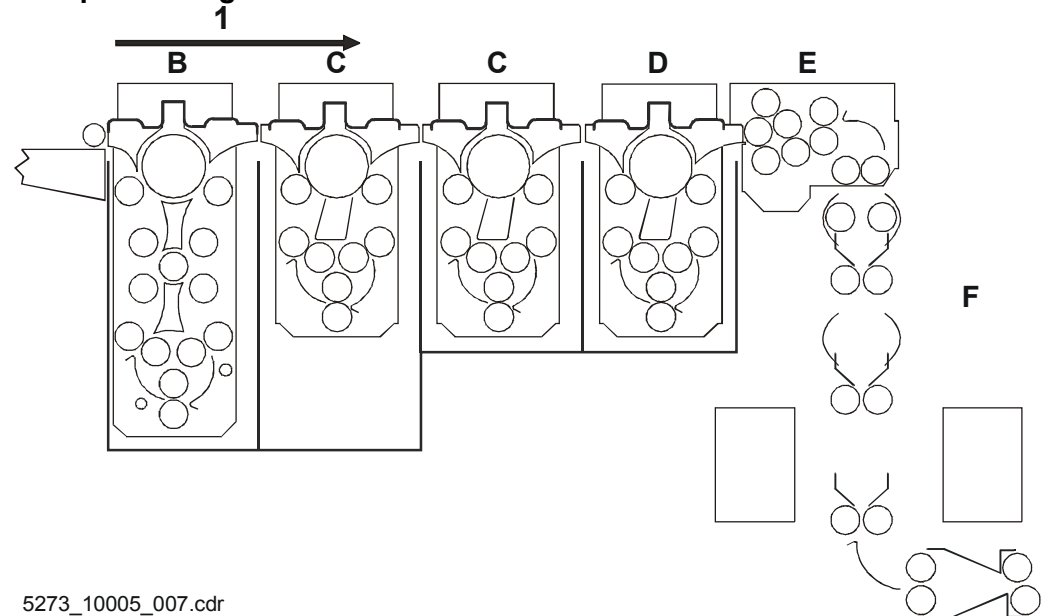
And a long acoustic signal (1s) indicates that the film has been accepted as an emergency film. Once the film passed through the feed rollers, the display changes back to the developer temperature and process time.

The display "EMERGENCY FILM" during film feed informs about the machine status! It must be considered that the film processing quality is not standard quality!

Check the current ACT developer temperature in the tank!

4.4.2

Film processing



5273_10005_007.cdr

Figure 7

1 Film transport direction

- The film is processed according to the selected process type (HT (60s), IP (90s), RP (2min), EXT (3min), (see Chapter 03)).
- The film runs through the developer (B), fixer 1 (C) and fixer 2 (C), and afterwards through the water (D). Then the film is transported into the dryer (F) via the distributor rollers (E).
- The replenisher pumps 2M1 and 2M2 are triggered always after the processing of 0.25 m² film.

4.4.3

Film drying

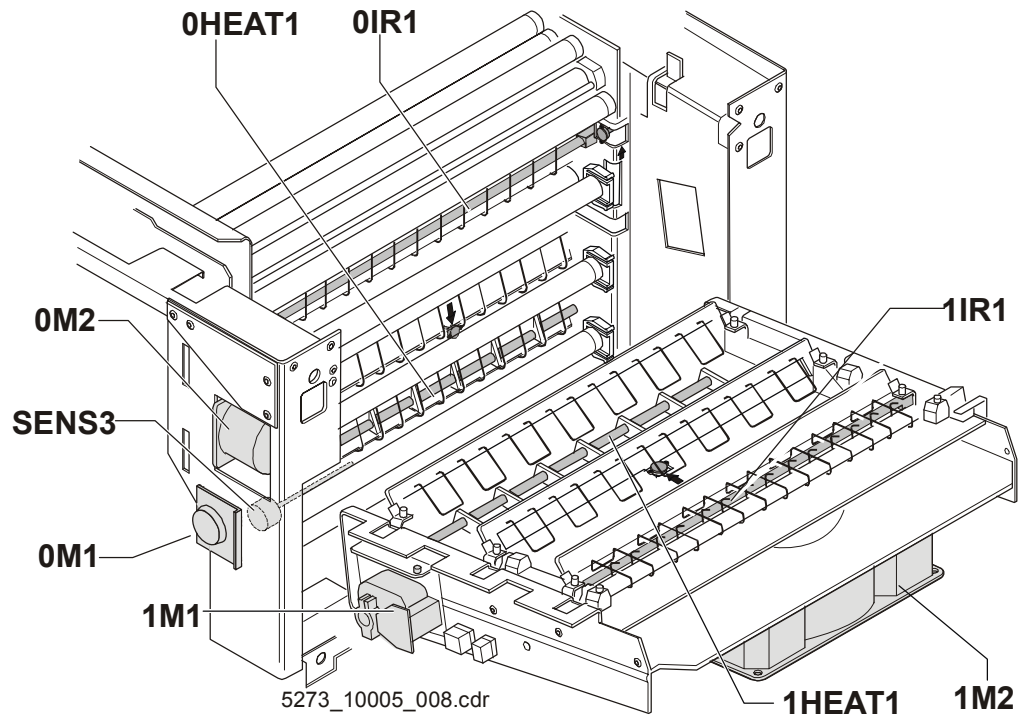


Figure 8

- The film runs from the water distributor unit downwards into the dryer.
- The IR-heaters 0IR1/1IR1 were switched on after the film was reliably detected in the film processor.
- The temperature in the dryer fan 0M1/1M1 is monitored by the sensor SENS3 and, if necessary, the convection heaters 0HEAT1/1HEAT1 are switched on as well.
- At the end of the drying process the film drops into the film chute.

4.4.4

Film transport into the film chute

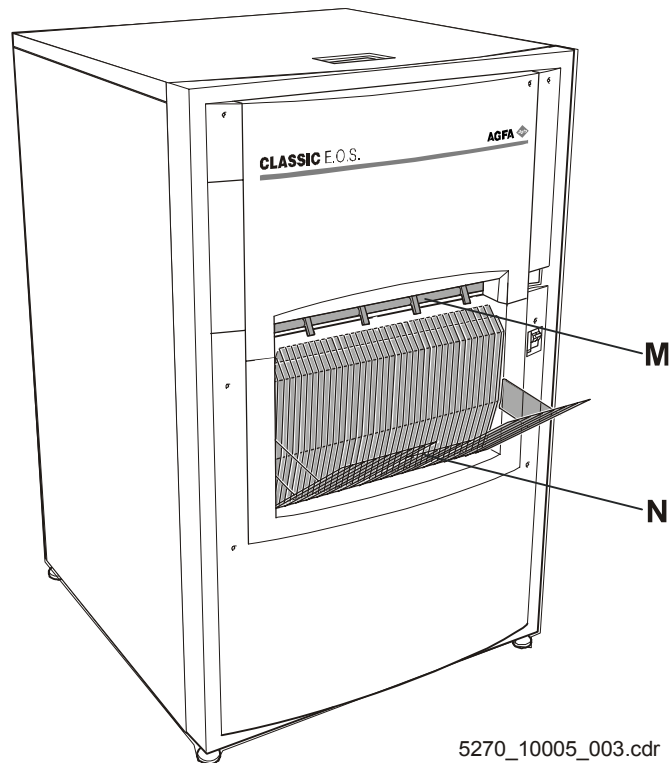


Figure 9

- The film is transported out of the transport rollers (M) and into the film chute (N).
- The IR-heaters switch off. The process is complete.
- After the IR-heaters switched off, main drive 0M2 switches off as well (DRIVEON = N) or switches to standby speed (DRIVEON = Y).
- 30s after the IR-heaters switched off the dryer fans 0M1/1M1 switch off as well.
- The water supply solenoid valve 2MG1 closes.
- Exhaust fan 1M2 switches back to half-power, or switches off completely.

5 Individual Functions

5.1 Water supply

5.1.1 Filling phase: Water tank empty detection

If the water level is too low, water will be refilled after the machine was switched on. The tank must be filled within a maximum time of 7 minutes.

The drive motor does not run during this filling phase. The display reads:

PLEASE WAIT

Feeding EMERGENCY FILM is not possible!

Once the water tank level was reached, the level may only drop again during operation that the tank can be refilled within 30 seconds. If the tank cannot be filled within this time the following error message is displayed:

Water
level

This is indicated by an intermittent buzzer signal and the water supply solenoid valve is closed.

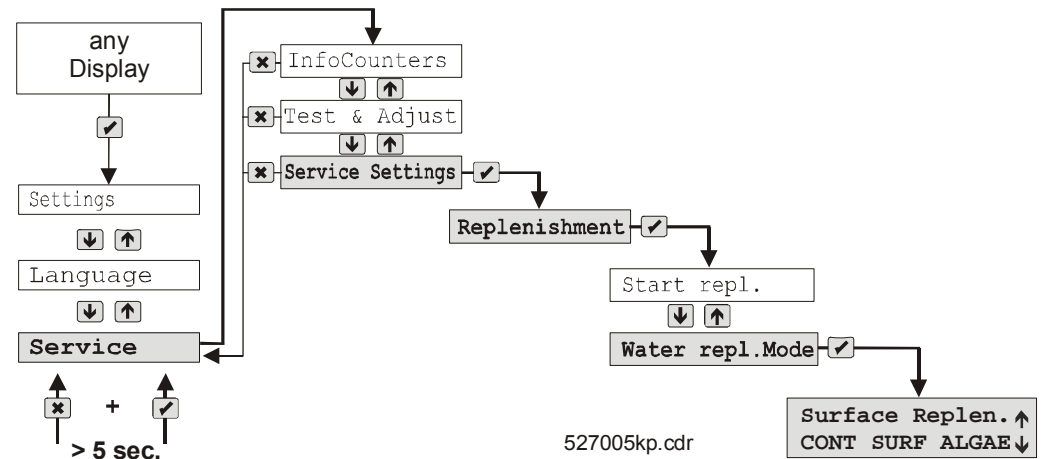
EMERGENCY FILM processing is possible!

5.1.2

Water supply during film cycle:

Water supply during the film cycle depends on the coded replenishment mode. The replenishment modes can be set up via code in the service program:

5.1.2.1

Water supply during a film cycle**CONT:**

Water supply starts when film feed is detected and ends with the end of the processing time.

SURF:

Water replenishment starts just before the film reaches the water tank. The time between film feed and start of water replenishment varies with the different process types.

The water supply rate is set up in the SERVICE program

<Wat. Repl. Value>.

ALGAE:

Prevention of algae: mode CONT. + 5min.

In addition there is a 5 minutes water supply every 30 minutes as long as no film is developed during this time.

5.2

Developer / fixer replenishment

The replenishment of developer and fixer depends on the processed amount of film.

A replenishment cycle starts per 0.25 sqm of processed film.

The actual replenishment rate is then the result of the replenishment time:

| |
|--|
| $\text{Replenishm. time} = \frac{\text{Set replenishment rate ml/sqm}}{\text{pump rate (ml/min)}} \times \text{processed film in sqm} \times 60$ |
|--|

The replenishment time is worked out by the machine according to the above formula and based on the entered "pump rate" and the desired replenishment amount per square meter.

Replenishment time in seconds;

Set replenishment rate (see Chapter 3, Setup of process parameters)

Pump rate in ml/min (see Chapter 3, Calibration of the replenishment rate)

Processed amount of film in square meters Automatic calculation based on the pulses of the magnetic rollers.

Example:

- Pump rate 150ml/min (5.07 fl.oz./min),
- Set replenishment rate 400 ml/m²,
- film amount in 0.25 sqm

$$\text{Replenishm. time} = \frac{400 \text{ ml/sqm}}{150 \text{ ml/min}} \times 0.25 \text{ sqm} \times 60 = 40 \text{ s}$$

During replenishment the supplied replenisher rate is recorded per second. After-replenishment takes place after a problem has been solved or after a power interruption. If the replenishment is interrupted (disposal tanks full, replenisher tanks empty, machine OFF) the missed replenishment amount is stored in the clock chip.

Once the correct operation continues, the missing replenishment is added.

If the machine needs more than 10 minutes for this added replenishment, the interval time between two films will be doubled, and after another 15 minutes it will be doubled again.

If the added replenishment time needs 20 minutes, the following message is displayed:

<Please wait>

If you feed film the display reads:

<Emergency film>

If the added replenishment time is below 10 minutes, the machine switches to standby status.

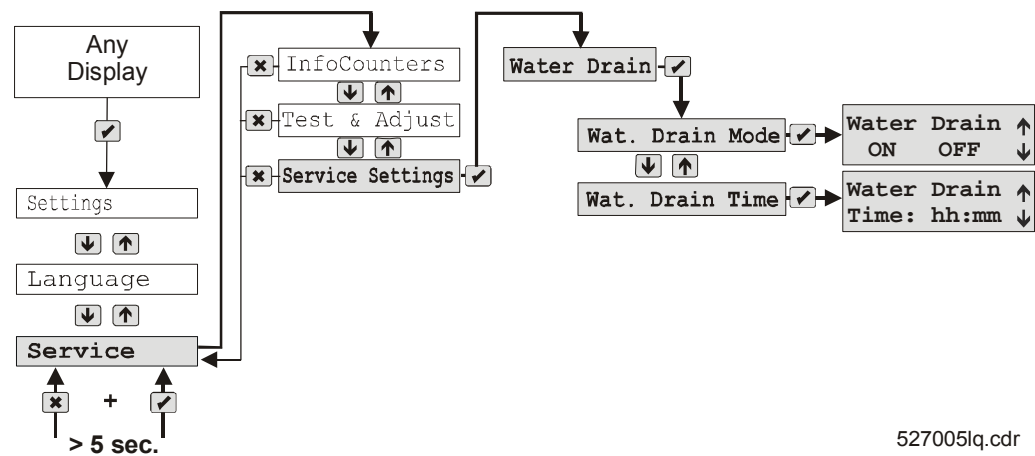


The data of the pump replenishment rate is stored in the battery supplied clock chip IC52! In case of an empty battery or if a new clock chip is inserted (e.g. replacement of PCB1), the machine requests a “new calibration”!

5.3

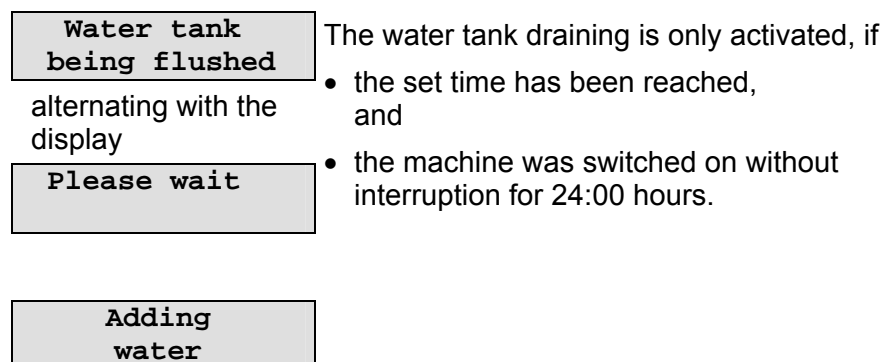
Automatic water tank draining / algae prevention

To avoid the growth of algae an automatic water tank drain can be activated. This function can be set up in the service program:



527005lq.cdr

A timer is triggered after machine switch-on.

**Emergency film processing is not possible during this time!**

If the time for tank draining comes during film cycle, the activation of the tank draining will be delayed until the film processing cycle is completed.

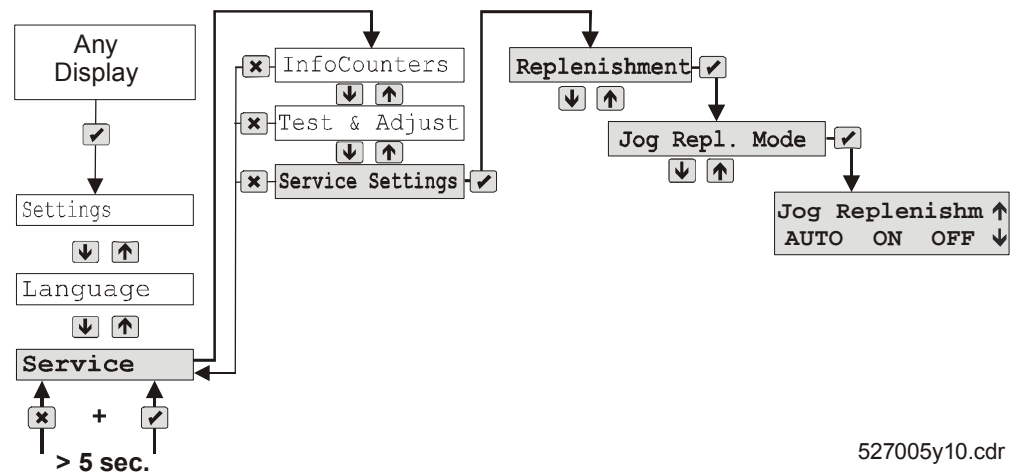
If a film is fed while the water is being drained, the water drain valve will close immediately. The water tank will be filled.

Tank draining starts again after the film processing has been completed!

5.4

Jog cycle: developer / fixer replenishment per hour

This function can be set up in the service program and is activated per default:



527005y10.cdr

OFF:

Jog cycle is inactive.

ON:

Jog cycle is activated. Every hour the replenishment rate set up in the service program for developer and fixer is replenished.

AUTO:

If the AUTO mode has been set up in the service program (only for stand-alone machines), the developed film amount per day is worked out. Upon switching on the machine compares the current date with the date of the last switch-off. If the dates are not corresponding, the film amount processed last will be checked. If this amount is less than 3 sqm, the jog cycle will be activated, otherwise it remains inactive.

Date, processed amount of film in square meters, and jog cycle mode are saved in the infocounter, whereby always the last 10 working days are recorded. Entry 11 overwrites the first recording.

5.5 Solution circulation; function of the synchro-motor pumps

Circulation is provided by the circulation pumps with synchro-drive (a rotating magnetic field drives a pump rotor with permanent magnet).

The circulation pumps guarantee a continuous circulation in the developer (0M7), fixer 1 (0M6), fixer 2 (0M5), and as an option in the water tank (0M4).

The circulation pumps 0M4-0M7 are switched on as soon as the levels of developer, fixer (fixer 1 / fixer 2), and water have been reached.

Start of the synchro-motor pumps:

After switching on the synchro-motors of the circulation pumps are triggered. If there is no OK signal from the motors after 67 s, a new trigger attempt is made. The system makes 2 attempts maximum. If then there is still no OK signal, the error message

| | |
|--------------------|--|
| <Service 514> | Circulation of developer, fixer 1 or 2 |
| or | |
| <Check water pump> | Water circulation |
| (corresponds to | |
| <Service 515>) | |

is generated.

80 seconds after the OK signal the developer and fixer heaters switch on .

And in addition the synchro-motors are switched off for 5 seconds during film cycle, is the OK signal switches to NOT OK for more than 15 seconds. This procedure is repeated during the film cycle. If the OK signal fails to come, this will only be indicated at the end of the film cycle.

Which synchro-motor is defective?

| | |
|---------------|--|
| LED on/light: | Synchro-motor and circulation pump OK; |
| LED off/dark: | Synchro-motor defective |

The synchro-motors are also triggered in case of a defect to show by means of the LEDs which one of the motors is defective.

5.6

Control of the developer heater

Heater OFF: ACT dev. temp. = NOM dev. temp.

Heater ON: ACT dev. temp. below NOM dev. temp.

(ACT dev. temp. < NOM dev. temp. -0.1°C)

In case of a deviation of -0.1°C to -1.0°C the developer heater will switch on and the machine remains ready for film processing.

Error messages:

1. An error message

Service 502

is displayed if there is no temperature increase in the ACT temperature of at least 1°C (1.8°F) within 4 min!

2. A service message

Service 501

is displayed if the ACT temperature is at least 1°C (1.8°F) above the NOM temperature.

5.7

Control of the fixer heater

In case of a NOM temperature below 34°C (93.2°F), the fixer heater switches on. Once the NOM fixer temperature has been reached for the first time, the ACT temperature must only vary between 28°C and 40°C (82.4°F and 104°F), or an error message will be displayed. If the temperature is below 30°C (86°F) the machine / display switches to heating phase.

Error messages:

1. An error message

Service 504

is displayed if there is no temperature increase in the ACT temperature of at least 1°C (1.8°F) within 4 min!

2. An error message

Service 503

is displayed if the ACT temperature is at least 1°C above the NOM temperature.

5.8

Control of the dryer

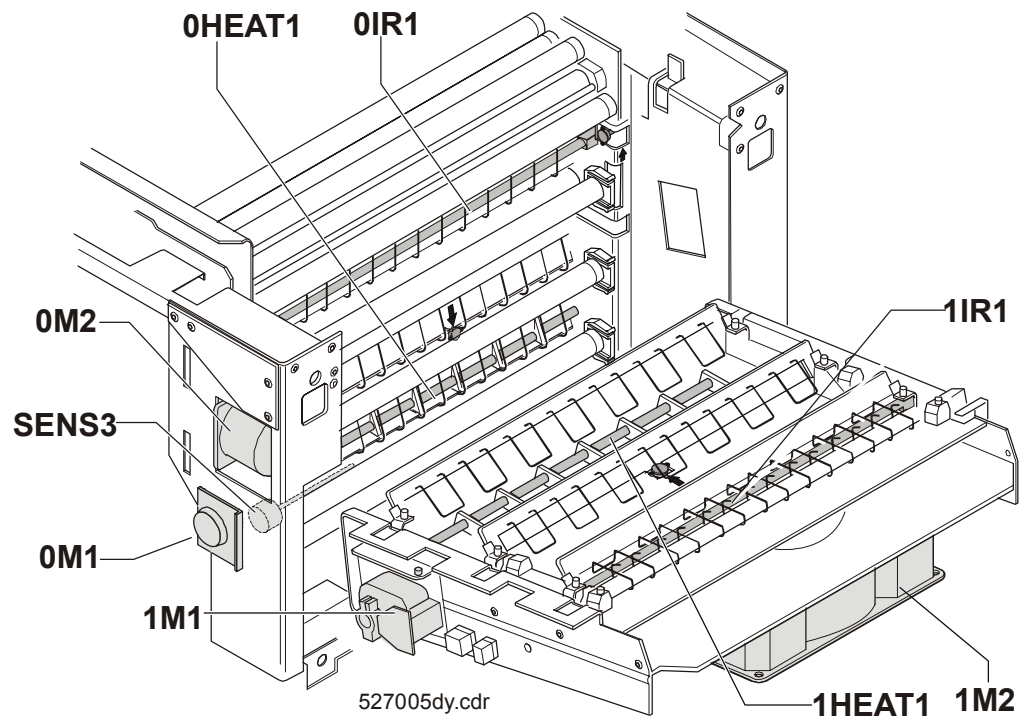
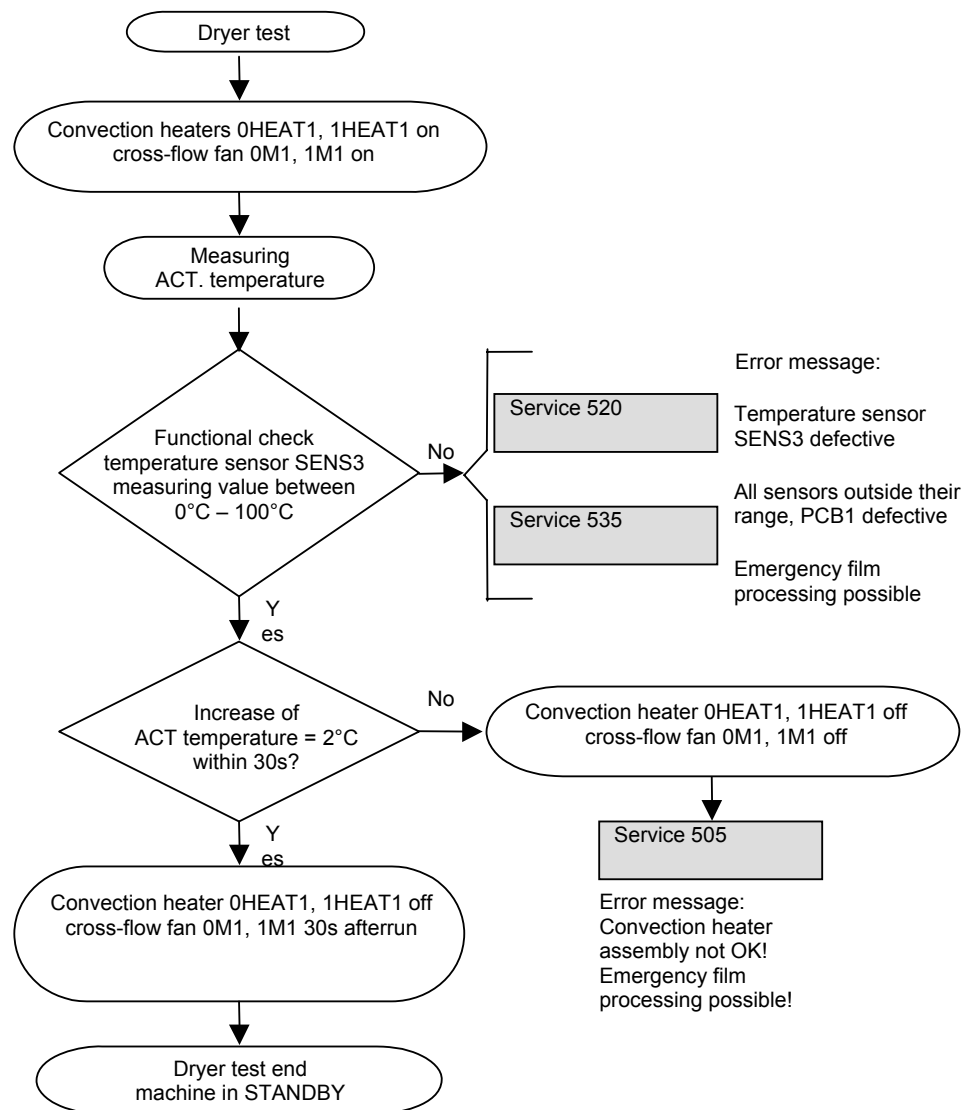


Figure 10

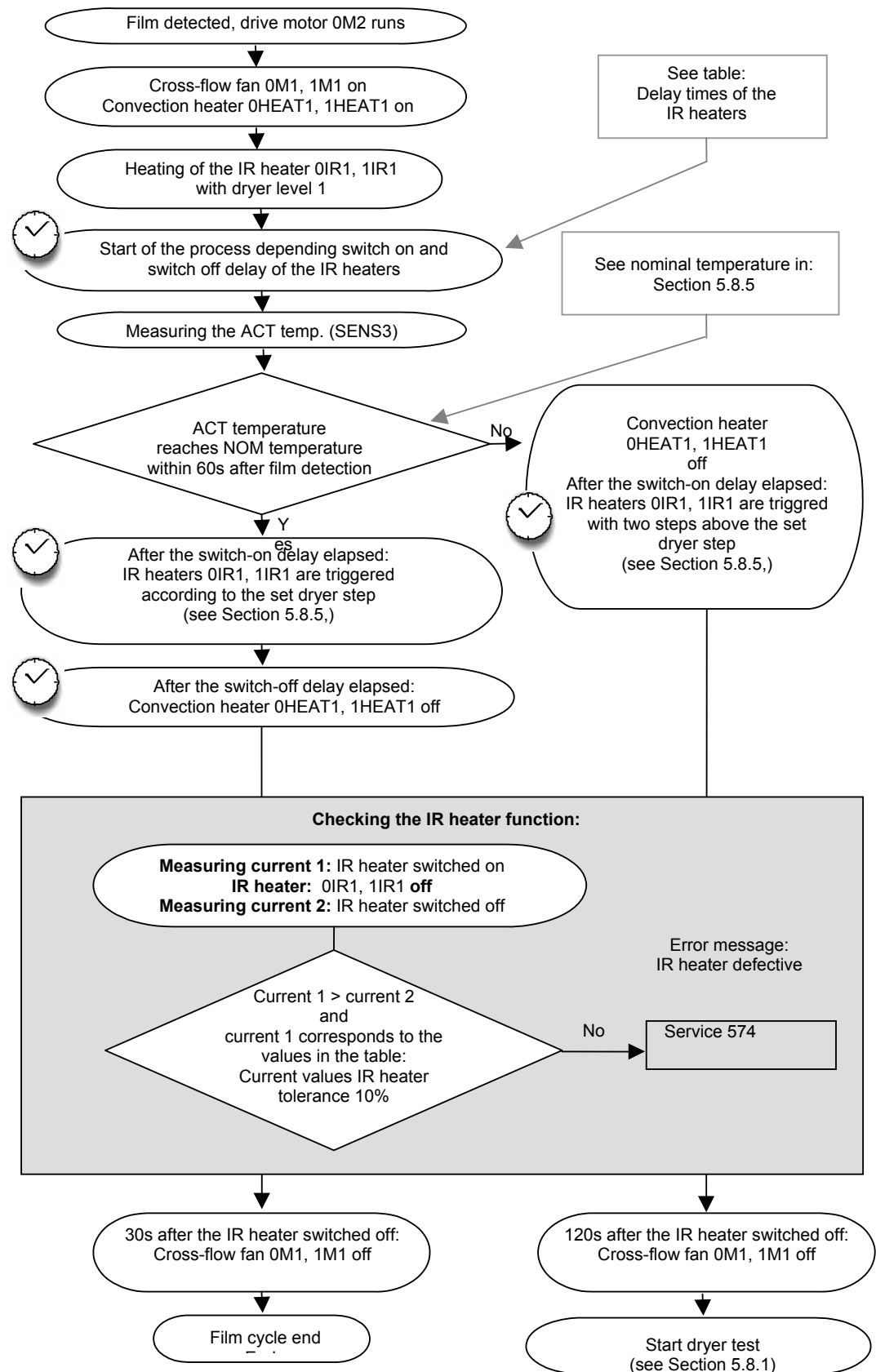
5.8.1

Dryer test during heating phase



5.8.2

Dryer control during film cycle



5.8.3

Table: Delay times of the IR-heaters depending on the process

| Process: | HT (60s) | IP (90s) | RP (2min) | EXT (3min) |
|-------------------|----------|----------|-----------|------------|
| Switch-on delay: | 35s | 65s | 85s | 145s |
| Switch-off delay: | 78s | 118s | 155s | 241s |

Table: Current values of IR-heaters depending on the dryer steps

Minimum current (A)

| Dryer steps: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Voltage range: <210V | 0.5 | 0.9 | 1.3 | 1.5 | 1.7 | 2.0 | 2.3 | 2.6 | 3.0 | 3.2 |
| 210-235V | 0.6 | 1.0 | 1.4 | 1.7 | 1.9 | 2.2 | 2.6 | 2.9 | 3.3 | 3.6 |
| >235V | 0.7 | 1.1 | 1.6 | 1.9 | 2.1 | 2.4 | 2.9 | 3.2 | 3.6 | 4.0 |

5.8.4

Error messages of the dryer control

1. An error message

Service 510

is displayed, if there is no OK signal after three attempts to switch on the cross flow fan. IR-heaters and convection heaters are not switched on. The film will be developed but not dried!

2. An error message

Service 505

is displayed if the temperature increase in the dryer is less than 2K within 30s.

3. An error message

Service 574

is displayed if the current value of the IR-heater deviates from the expected value by more than 10%.

The expected value is determined by the set dryer step, the process type, and the available mains voltage.

5.8.5

Dryer step setting

- The complete dryer function is influenced by three parameters:
 - available mains voltage,
 - set process type, and
 - selected dryer step.
- We differentiate three mains voltage ranges: below 210V, between 210V and 235V, and above 235V.
- The process types are combined in two groups: 60s/90s (HT/IP) and 2min/3min (RP/EXT).
- The adjustment range of the various dryer steps is the result of defined combinations of the voltage levels for the IR-heaters and temperature steps of the convection heaters.
- There are 13 dryer levels available.

The following tables shows the combination possibilities of the parameter values for 13 possible dryer levels or steps:

Mains voltage < 210V

| Process | HT (60s) / IP (90s) | | RP (2min) / EXT (3min) | |
|------------|---------------------|----------------|------------------------|----------------|
| Dryer step | IR (V) | NOM temp. (°C) | IR (V) | NOM temp. (°C) |
| 1 | 0 | 40 | 0 | 35 |
| 2 | 70 | 40 | 0 | 40 |
| 3 | 70 | 45 | 70 | 40 |
| 4 | 100 | 42 | 70 | 42 |
| 5 | 125 | 40 | 100 | 40 |
| 6 | 145 | 40 | 125 | 40 |
| 7 | 145 | 45 | 145 | 40 |
| 8 | 160 | 40 | 145 | 42 |
| 9 | 175 | 40 | 160 | 40 |
| 10 | 190 | 45 | 190 | 45 |
| 11 | 200 | 45 | 200 | 45 |
| 12 | 208 | 46 | 208 | 46 |
| 13 | 230 | 44 | 208 | 40 |

Mains voltage 210V - 235V (200V)

| Process | HT (60s) / IP (90s) | | RP (2min) / EXT (3min) | |
|------------|---------------------|----------------|------------------------|----------------|
| Dryer step | IR (V) | NOM temp. (°C) | IR (V) | NOM temp. (°C) |
| 1 | 0 | 40 | 0 | 35 |
| 2 | 70 | 40 | 0 | 40 |
| 3 | 70 | 42 | 70 | 40 |
| 4 | 100 | 40 | 70 | 42 |
| 5 | 125 | 40 | 100 | 40 |
| 6 | 145 | 40 | 125 | 40 |
| 7 | 145 | 42 | 145 | 40 |
| 8 | 160 | 40 | 145 | 42 |
| 9 | 175 | 40 | 160 | 40 |
| 10 | 190 | 45 | 190 | 45 |
| 11 | 200 | 45 | 200 | 45 |
| 12 | 208 | 40 | 208 | 40 |
| 13 | 230 | 36 | 208 | 40 |

Mains voltage > 235V

| Process | HT (60s) / IP (90s) | | RP (2min) / EXT (3min) | |
|------------|---------------------|----------------|------------------------|----------------|
| Dryer step | IR (V) | NOM temp. (°C) | IR (V) | NOM temp. (°C) |
| 1 | 0 | 40 | 0 | 35 |
| 2 | 70 | 40 | 0 | 40 |
| 3 | 70 | 42 | 70 | 40 |
| 4 | 100 | 40 | 70 | 42 |
| 5 | 125 | 40 | 100 | 40 |
| 6 | 145 | 40 | 125 | 40 |
| 7 | 145 | 42 | 145 | 40 |
| 8 | 160 | 40 | 145 | 42 |
| 9 | 175 | 40 | 160 | 40 |
| 10 | 190 | 40 | 190 | 45 |
| 11 | 200 | 40 | 200 | 40 |
| 12 | 208 | 36 | 208 | 36 |
| 13 | 208 | 36 | 208 | 36 |

5.9**Transformer**

A toroidal core transformer provides the required voltages for the machine. Secondary voltages of 15V, 22V, and 30V are provided for DC consumers. The respective voltages for dryer operation are tapped. Whereby the respective voltage values depend on the applied mains voltage.

5.10**Drive motor**

- Once all tank levels have been reached, the drive motor starts at 0.5 m/min during the heating phase.
- The following functions may be set up in the SERVICE program
<Drive on>:
"Motor sopped during STANDBY phase"
or
"running at 0.5 m/min (DEFAULT setting)"
during the STANDBY phase.
- The operating speed (film transport) depends on the selected process (HT (60s), IP (90s), RP (2min), EXT (3min)).
- Triggering comes through the Control Board PCB1.
- Switching the process application
The speed correction is accepted 7 seconds after process switching.

The following table shows the different motor speeds in relation to the selected process:

| Process | Number of revolutions |
|------------|-----------------------|
| HT (60s) | 3353 |
| IP (90s) | 2218 |
| RP (2min) | 1690 |
| EXT (3min) | 1108 |

An error message

Service 506

is displayed.

- If the ACT motor speed deviates from the NOM speed by more than 50%, the motor is switched off.
- Standard control accuracy better than 2%.
- If the motor internal supply voltage increases to a higher value than 36V, the motor will be switched off.
This happens if the mains supply is higher than 250V.

5.11**Temperature measuring**

- To measure the temperature, the voltage values on the temperature sensors SENS1 (developer) and SENS2 (fixer) are determined every 100ms.
- The average value of the voltages is determined by 10 measuring cycles. The temperature corresponding to this voltage value is then taken from an internally stored table.
- The temperature is shown with an accuracy of 0.1°C.
- Plausibility check:
All temperature values below 0°C or above 100°C are considered as non-real temperature values and will be discarded!
And an error message is generated! (See Chapter 6.3)

5.12**Level detection**

LEVEL detection is provided in the machine tanks
developer / fixer 1 / fixer 2 / water tank (dev / fix1 / fix2 / wat)
with one electrode each. When the tank is filled and the solution reaches the electrode a ZERO level is applied at the sensor.
The voltage value at the sensor is checked every 100 ms. An average value is worked out based on 10 measuring cycles.
The LEVEL is reached once the voltage value is approx. 3 V.
For possible error messages refer to Chapter 6.3.

5.13**Current sensor**

During a <Teach In> the current sensor PCB2 determines the ACT current values of the individual users. These current values are saved a NOM. current values. The current values of the consumers measured during the function are compared to the saved NOM current values and then evaluated. In case of major deviations (see Current value table, Chapter 6.2), error messages will be created which are displayed as Service messages with error numbers. Error messages see Chapter 6.3

5.14**Power failure**

| | |
|----------------------------------|--|
| Power failure during film cycle: | Once the mains power comes back a process cycle with dryer function and water supply takes place. Function as in emergency film phase. |
| Power failure in standby: | Falls back to heating phase → STANDBY |

5.15

Data saving

All operation relevant data is saved in the chips IC50, IC51, IC52, and IC53 on the Control Board. Specifically:

| Module | Data |
|----------------------|---|
| EPROMs IC50, IC51 | <ul style="list-style-type: none">• Machine software |
| Clock chip IC52 | <ul style="list-style-type: none">• Status of the replenishment rate calibration• Values of the replenishment rate calibration• Operating hours• Infocounter data• Expiration date of the maintenance interval• Operation relevant data in case of power failure |
| EEPROM IC53 | <ul style="list-style-type: none">• All values and settings of the SETUP menu• List of detected problems (error hit list) |

6

6.1

Roller Diagram

Classic E.O.S. (Type 5270/100)

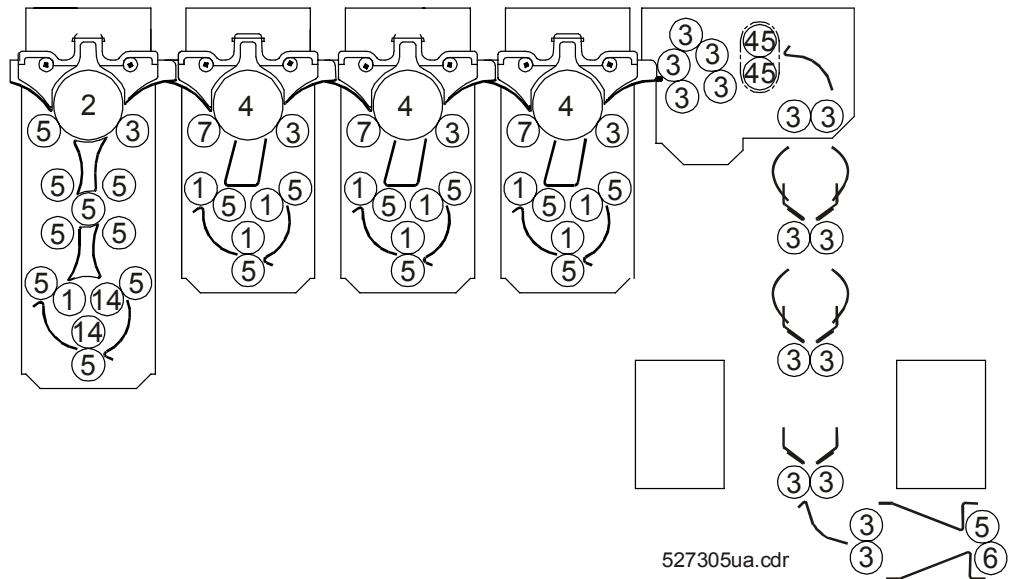


Figure 11

- | | |
|----|----------------------|
| 1 | Roller gray D=22.5 |
| 2 | Roller gray D=48 |
| 3 | Roller gray D=22.5 |
| 4 | Roller yellow D=48 |
| 5 | Roller yellow D=22.5 |
| 6 | Roller red D=22.6 |
| 7 | Roller yellow D=22.5 |
| 14 | Roller gray D=22.8 |
| 45 | Roller gray D=22.5 |

6.2

Classic E.O.S. CL (Type 5270/105)

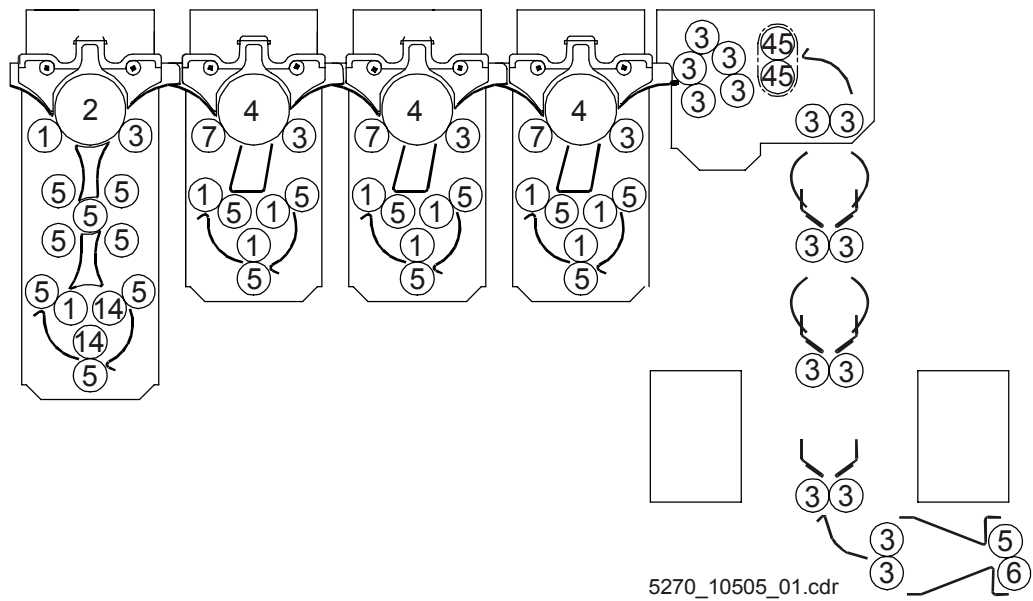


Figure 12

- 1 Roller gray D=22.5
- 2 Roller gray D=48
- 3 Roller gray D=22.5
- 4 Roller yellow D=48
- 5 Roller yellow D=22.5
- 6 Roller red D=22.6
- 7 Roller yellow D=22.5
- 14 Roller gray D=22.8
- 45 Roller gray D=22.5

Section 6

contains detailed information for repair and service.

Exact information of the machine functions (section 5) is the prerequisite for doing repairs and adjustments.

Section 6 is divided into the following chapters:

- 1 Safety regulations / general hints for repair work
- 2 Tools and auxiliary means (also software tools)
- 3 Troubleshooting
- 4 Electrical and mechanical codes, fuse tables
- 5 Replacement of parts, including adjustment instructions when applicable
- 6 Adjustments (software and hardware)

Chapter 6.1

Contents

| | | |
|------------|--|----------|
| 1 | Safety Check..... | 1 |
| 1.1 | Checking the function of the GFI switch 0FI..... | 3 |
| 2 | Repair Instructions..... | 4 |
| 2.1 | Cover switch | 4 |
| 2.2 | Light tightness of the machine..... | 5 |
| 2.3 | Repairs on circuits | 6 |
| 2.4 | Repairs on printed circuit boards | 6 |
| 2.5 | Replacing the clock chip IC 52 (battery) on the Control Board PCB1..... | 7 |
| 2.6 | Working on the dryer | 8 |
| 2.7 | Handling of chemicals | 8 |

1

Safety Check

- To check the power supply disconnect the machine from the mains.
- Use the Voltmeter to verify that there is no voltage.

Upon completion of every repair or maintenance the following safety checks are required.

Country-specific regulations must be considered as well.

Visual check

- Make sure that no obstacles, protruding parts, defective housing, or sharp edges are exposed around the machine.

**Checking the functions of safety devices**

- -Check the function of the cover/door switch.

Tightness check

- Check the hoses and tanks for leaks, inside and outside the machine, on all supply and drain hoses.
- Remove any remainders of water and chemicals. Observe the disposal regulations for chemicals.



Electrical check

- Check the power cable and the cables inside the machine for damage.
- Check the strain relief of the power cable.
- Check the line fuses for the required value.
- Check the function of the air filter and the cooling.
- Check the cable connections and plug for burnt spots.
- Check the grounding connections at the metal panels and housing.

Upon repairs regarding the mains voltage the protective earth must be checked (VDE standard). The resistance of the PE with an earthed pin connector is $\leq 0.3 \text{ Ohm}$, with a fixed connection it is $\leq 0.2 \text{ Ohm}$ (according to VDE 0702, VBG4, Edition 1997).

- 1: Internal circuit of the machine to be tested
- 2: Measuring equipment for testing the protective earth resistance
- 3: Connection between meter and protective earth
- 4: Connection between meter and conductive parts which may be touched in the machine to be checked

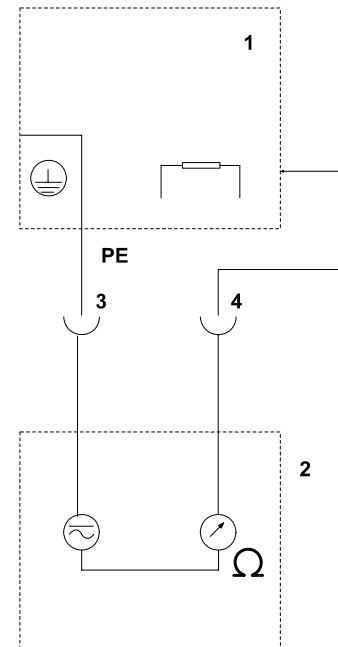


Figure 1

When measuring the resistance consider that the total value always includes the resistance of the measuring cable.

1.1

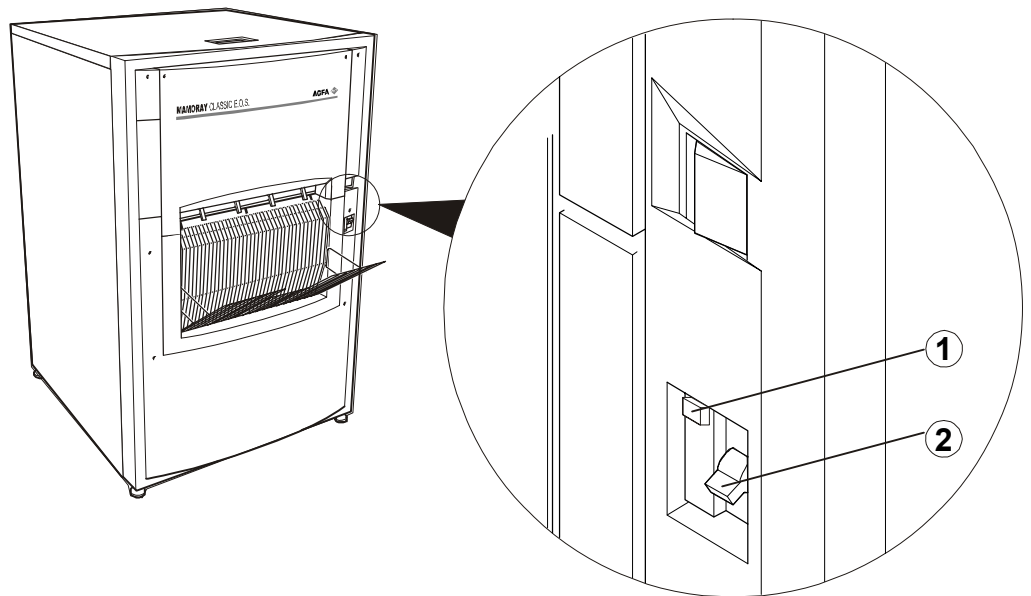
Checking the function of the GFI switch 0FI



A GFI switch: ($I_N = 30\text{ mA}$ in compliance with VDE 664) is integrated in the machine.

Check the function of the ground fault interrupter (GFI switch).

- ① Press the button, this releases / deactivates the GFI switch!
- ② Activate the GFI switch by resetting the toggle switch.
(No automatic reset)



5272_10003_07.cdr

Figure 2



Information for the customer: This routine must be repeated 1x per month.



The machine must not be put in operation without an installed GFI switch!

2

2.1

Repair Instructions

Cover switch

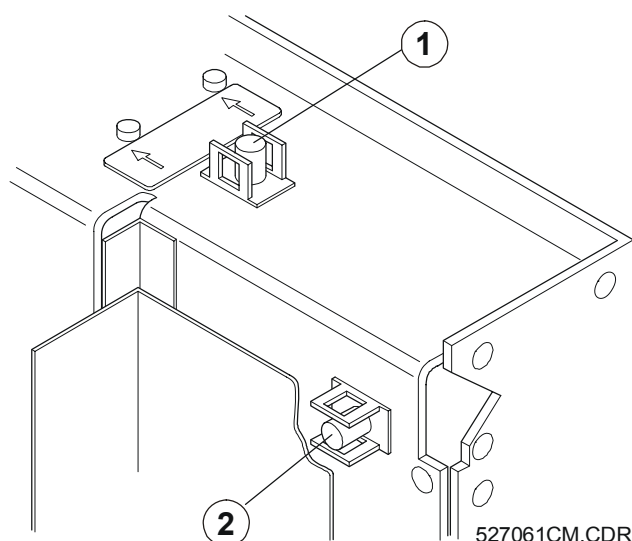


Figure 3

① = Safety switch (cover) 0SW2

② = Safety switch (dryer flap) 0SW3

To ensure safety for the customer the machine has two safety switches (0SW2 and 0SW3).



For service purposes the function of the safety cover switch can be overridden with a service key (locking pin CM+9042663090). However, be careful, there is a risk of injuries by moving mechanical or electrical parts.

Make sure to remove the locking pin before closing the covers.

Otherwise the cover switch may be damaged or the adjustment position is lost. The safety function for the customer is then no longer effective.



But even in case of interrupted safety switches 0SW2 ① and/or 0SW3 ② and with the mains switch 0SW1 off, there is still power applied on the following components as long as the power cord is plugged in:

- Ground fault interrupter 0FI
- Mains switch 0SW1

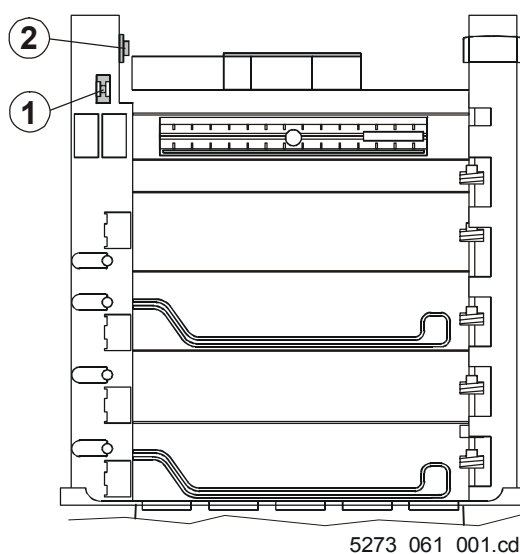


Figure 4

2.2**Light tightness of the machine**

The processor must not be installed in an area with direct sunlight (max. 2500 Lux).

The machine must not be opened during the operation.
It is light tight only if all panels are correctly mounted.

For correct removal of panels refer to the illustration below.
Attach the panels and covers in reverse order for light tight connection.

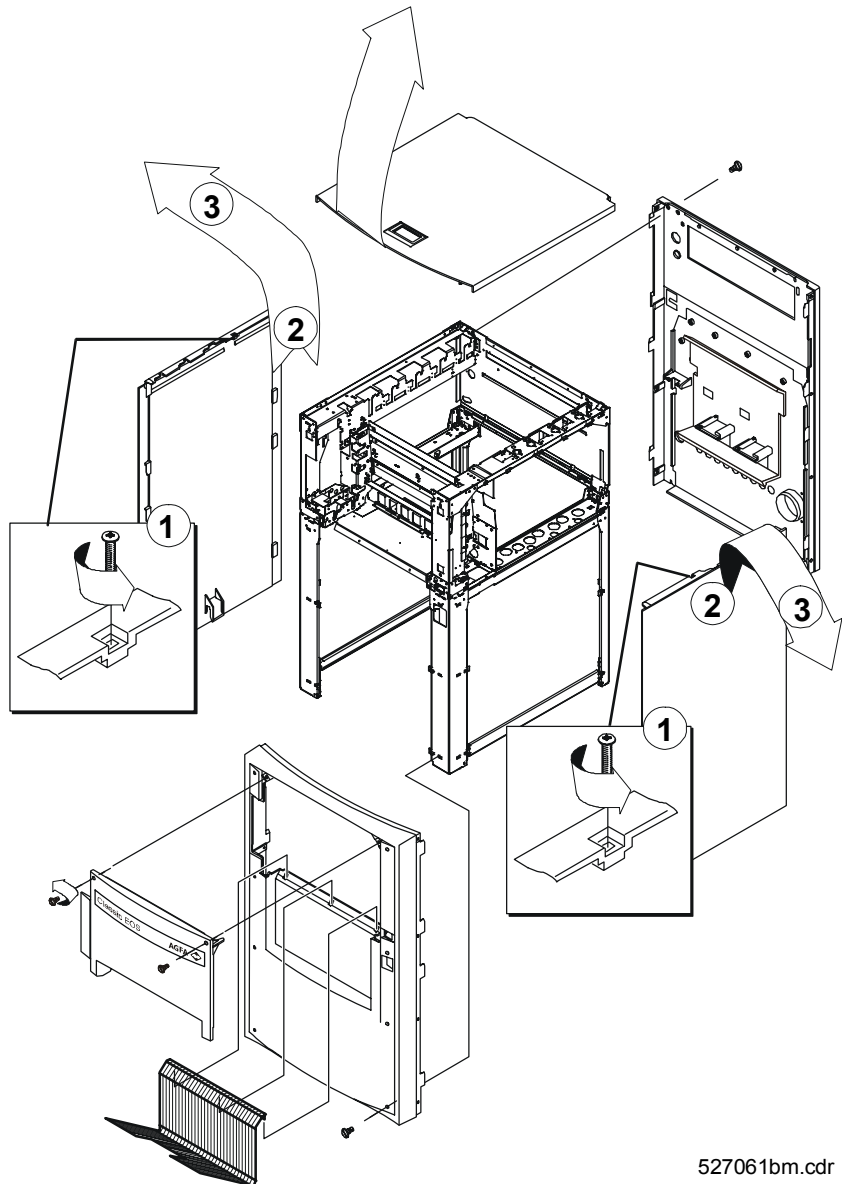


Figure 5

2.3 Repairs on circuits



Wear the grounding wrist strap to discharge any electrostatic charges (order no. 9.9999 0830.0).

If there is no grounding strap available, possible electrostatic charges may also be discharged by touching a metal cover part or the PE.

2.4 Repairs on printed circuit boards



- Make sure to unplug the power cable before disconnecting or connecting any plugs on the printed circuit boards (PCB).
- Never expose PCBs to direct sunlight.
- Observe the general precautions for electrostatic discharges when handling PCBs and other internal components.
- Only keep PCBs in their protective bags.
- If you must take a PCB out of its bag, place it on a conductive mat to protect it from static electricity.
- Never touch the pins of an IC with bare fingers.
- If it is necessary to touch an IC or another electronic component on a PCB make sure to be grounded by wearing a grounding wrist strap.
- Right after the removal the electronic component should be placed in the provided protection bag. Never walk with an unprotected PCB across carpet or plastic floor covering.
- Touch PCBs only at the corners. Never touch the pins or conductive parts of an IC with bare fingers.
- Do not use a multimeter to check an IC directly. It is better to check the connection on the respective PCBs.
- Avoid short circuits at the pins of an IC caused by metal tools.

2.5

Replacing the clock chip IC 52 (battery) on the Control Board PCB1

Risk of explosion in case of incorrect disposal of the clock chip!

- All data in the temporary infocounter is lost upon replacement of the clock chip IC52.
- Observe the correct procedure for the replacement of the clock chip IC 52 (observe the circular mark on the clock chip).

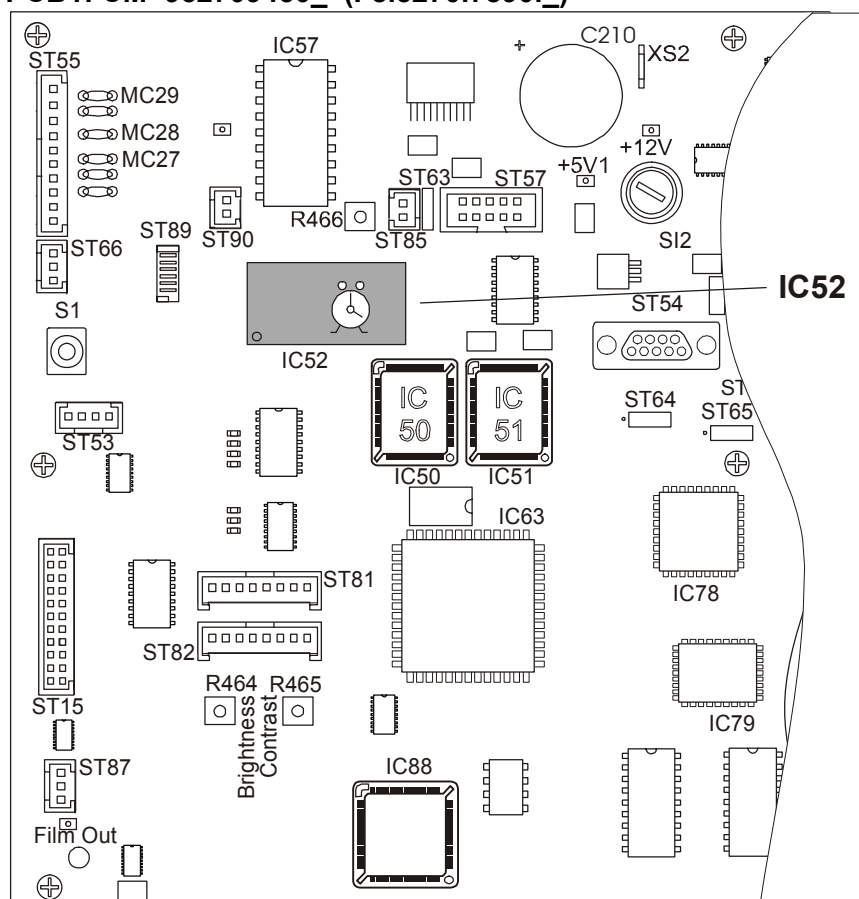


For a detailed description for the replacement procedure of the clock chip IC 52 refer to Chapter 6.5.

- Dispose of a used clock chip in compliance with the regulations by the manufacturer or the local authorities.

Position of clock chip IC 52 on the Control Board PCB1:

PCB1: CM+952709450_ (F8.5270.7890._)



5273_061_002.cdr

Figure 6

2.6

Working on the dryer



There is a risk of burning injuries during and shortly after film processing!

2.7

Handling of chemicals



- Observe the respective safety regulations!
- Wear goggles (risk of splashing).
If in spite of these precautions chemicals get into your eyes, rinse your eyes immediately with pure water.
Afterwards see a doctor.
- Avoid the breathing of chemical fumes. Provide for sufficient ventilation at the installation site (see Chapter 1).

Chapter 6.2

Contents

| | | |
|------------|---|-----------|
| 1 | Recommended Tools and Test Equipment..... | 1 |
| 2 | Resetting Customer-Specific Settings (BASEINIT) | 2 |
| 2.1 | Range of application | 2 |
| 2.2 | Function | 2 |
| 2.3 | Initiate a BASEINIT: | 2 |
| 2.3.1 | SERVICE program | 3 |
| 2.3.2 | Manual routine | 3 |
| 2.3.3 | Automatic routine | 3 |
| 3 | Resetting Counters and Lists (Infocounters) | 4 |
| 3.1 | Resetting the temporary infocounters..... | 4 |
| 3.2 | Resetting the logbook, error lists, and temporary infocounters..... | 5 |
| 3.3 | Resetting the operation time counter, logbooks, errors lists, and infocounters | 5 |
| 3.3.1 | Range of application | 5 |
| 3.3.2 | Function and activation | 5 |
| 4 | TEACH IN | 7 |
| 4.1 | Error messages | 9 |
| 4.2 | Table of current values | 10 |

1

Recommended Tools and Test Equipment

In addition to the general tools, every service technician has in his tool box, the following equipment is required for the service:

| Auxiliary equipment | Spare part no. | Application |
|--|----------------|--|
| Extraction tool for ICs in PLCC housings | CM+9999910050 | Replacement of EPROMs |
| Grounding strap | CM+9999908300 | Replacement of PCBs and EPROMs |
| Measuring glass (graduated beaker), capacity 1000 ml (33.82 fl.oz.) | --- | Adjustment of basic replenishment rate for developer / fixer |
| Locking pin (service key) | CM+9042663090 | To override 2 safety switches (cover and dryer flap) (order 2 keys) |
| Removal tool | CM+9999907930 | Removal of the AMP plug contacts |
| Thermometer Range: -10 to +60°C Scaling: 1°C, Reading Accuracy: 0.5°C | CM+9999902910 | Temperature sensor calibration and temperature measuring of the developer and fixer solutions. |

2 Resetting Customer-Specific Settings (BASEINIT)

2.1 Range of application

Only execute a BASEINIT in case of:

- Software change
- Inexplicable functional problems

2.2 Function



With a BASEINIT all standard process data is loaded from the EPROM (IC 50/51) into the EEPROM. All customer-specific settings in the EEPROM are overwritten and must be entered again via the SERVICE program <Service Settings>.



DEFAULT settings after a BASEINIT see Chapter 3.

Exception:

The following settings are only overwritten if an exceeded limit value is detected during the plausibility check.

| Settings | Limit values during plausibility check |
|--|---|
| Replenisher pump capacity | < 150ml/min or > 1.5l/min (< 5.07fl.oz./min or > 50.73fl.oz./min) |
| Display language | not defined |
| Process application | other than CURIX, MAMMO, FUJI Standalone, FUJI IF Docking, LR3300 |
| Calibration of the developer temperature | > +/- 1°C |

Furthermore the temporary infocounters will be deleted.

If the system detects an invalid process application, temporary and non-temporary infocounters are deleted.

2.3 Initiate a BASEINIT:

There are three possibilities to trigger a BASEINIT:

- via the SERVICE program
- manually
- automatically

2.3.1

SERVICE program

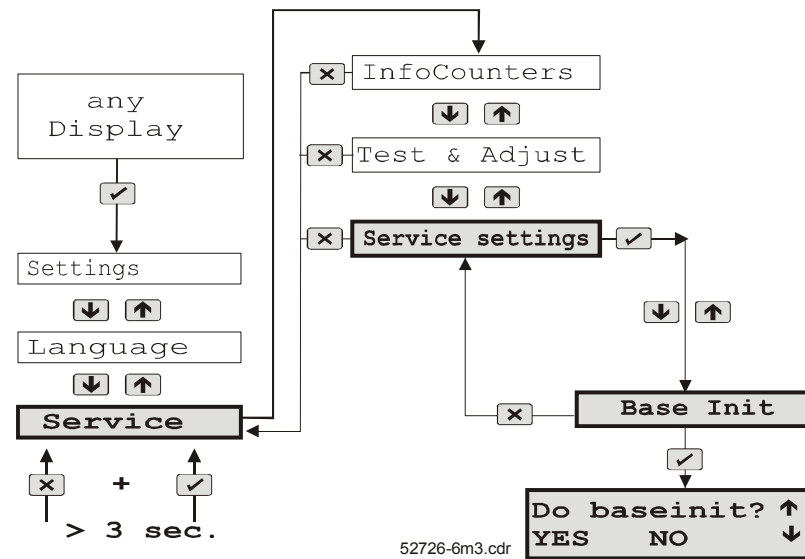









Figure 1

| Action | Keys | Display text |
|---------------------------------------|--|------------------------|
| Select the "Base Init" dialog window. |   | Base Init |
| Confirm the input. |  | Do baseinit? YES NO |
| Select YES to execute a BASEINIT. |   | YES |
| Confirm the input. |  | |
| | | Ready RP 34.2 °C |

2.3.2

Manual routine

The machine is switched off. Press the  key and hold it, switch on the machine, wait until the status indication comes up on the display. Depending on the set process and the current developer temperature the following status is displayed:

| | |
|----|---------|
| RP | 24.9 °C |
|----|---------|

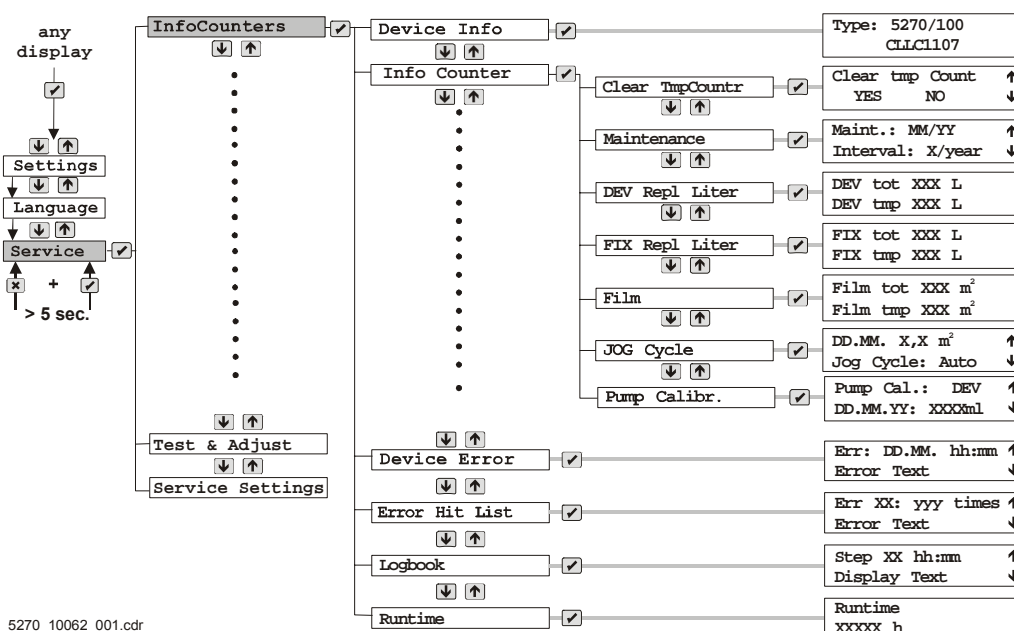
BASEINIT has been completed.

2.3.3

Automatic routine

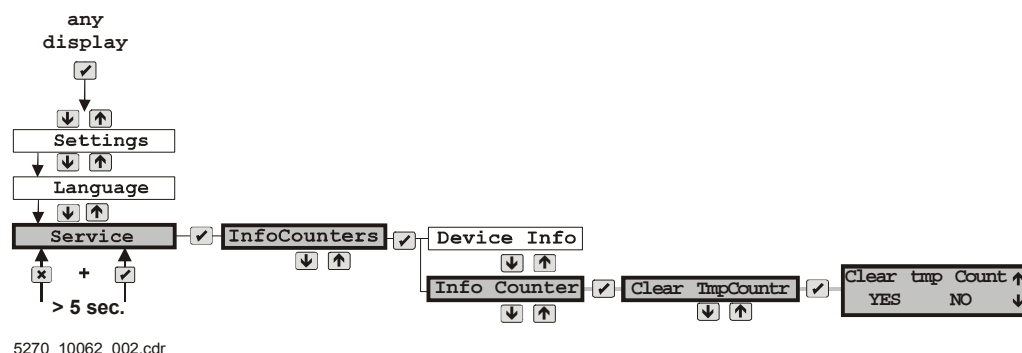
The machine initiates an automatic BASEINIT if a different software version number than the one stored in the EEPROM is detected in the EPROM (IC50/51) during the initialization.

3 Resetting Counters and Lists (Infocounters)



3.1 Resetting the temporary infocounters

Execution of the function <Clear tmp Count> in the service program:

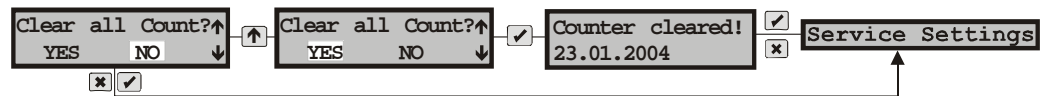


deletes the following temporary infocounters:

- **DEV tmp XXX L**
Developer replenishment since last maintenance
- **FIX tmp XXX L**
Fixer replenishment since last maintenance
- **Film tmp XXX m²**
Processed film since last maintenance

3.2 Resetting the logbook, error lists, and temporary infocounters

Execution of the function <Clear All Count?> upon exit from the service program



5270_10062_003.cdr

resets the following temporary infocounters and lists:

- **DEV tmp XXX L**
Developer replenishment since last maintenance
- **FIX tmp XXX L**
Fixer replenishment since last maintenance
- **Film tmp XXX m²**
Processed film since last maintenance
- **Device Error**
The last 100 errors (maximum) with date and time
- **Error Hit List**
The previously occurred errors according to occurrence frequency with error number and list position
- **Logbook**
Machine actions with plaintext and time

3.3 Resetting the operation time counter, logbooks, errors lists, and infocounters

3.3.1 Range of application

Execute only in case of:

- Replacement of the clock chip
- Replacement of Control Board PCB1 (GS1)

3.3.2 Function and activation

This deletion function resets or deletes all operation time counters, all entries in the logbook, the error lists, and the infocounters.



Therefore it also deletes the values for maintenance (date and intervals) as well as the calibration of the pumps. After execution of this deletion function, the maintenance indicator in the service program <Service Settings>/<maintenance> must be set again, and the pumps must be recalibrated in the service program <Test & Adjust>.



Setup of maintenance intervals and pump calibration see Chapter 3.

The deletion function, which is activated by pressing the two arrow keys simultaneously and switching on the machine, resets the following infocounters, lists, and operation time counters:

- **Maint.: MM/YY**
Interval: X/Year
Date of last maintenance and maintenance interval
- **DEV tot XXX L**
DEV tmp XXX L
Replenishment of developer, total and since last maintenance
- **FIX tot XXX L**
FIX tmp XXX L
Replenishment of fixer, total and since last maintenance
- **Film tot XXX L**
Film tmp XXX L
Processed film, total and since last maintenance
- **Pump Cal.: DEV**
DD.MM.YY: XXXXml
Date of developer replenishment rate calibration with adjusted calibration rate
- **Pump Cal.: FIX**
DD.MM.YY: XXXXml
Date of fixer replenishment rate calibration with adjusted calibration rate
- **Device Error**
The last 100 errors (maximum) with date and time
- **Error Hit List**
The previously occurred errors according to occurrence frequency with error number and list position
- **Logbook**
Machine actions after switching on with plaintext and time
- **Runtime**
Operating hours of the machine

4

TEACH IN

Measuring the current of all consumers for the automatic error diagnosis



Current measuring of the consumers is only possible as of software version **CEOS 1714** and with integrated current sensor.

By means of this function the current values of the individual consumers in relation to the applied mains voltage are measured and saved. The measured current value is then used as reference for the automatic diagnosis function.



A **<Teach In>** must be made after replacement of a consumer.

The **<Teach In>** procedure must be completed to be able to exit the **<Teach In>** dialog.

The current is measured via the Current Sensor Board PCB2.

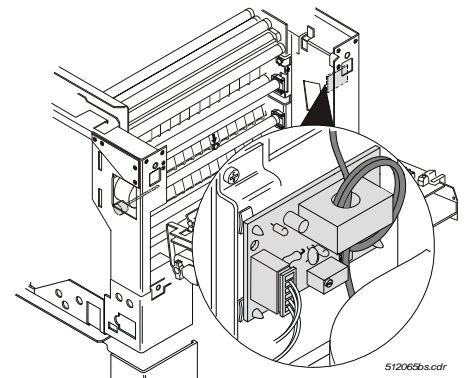
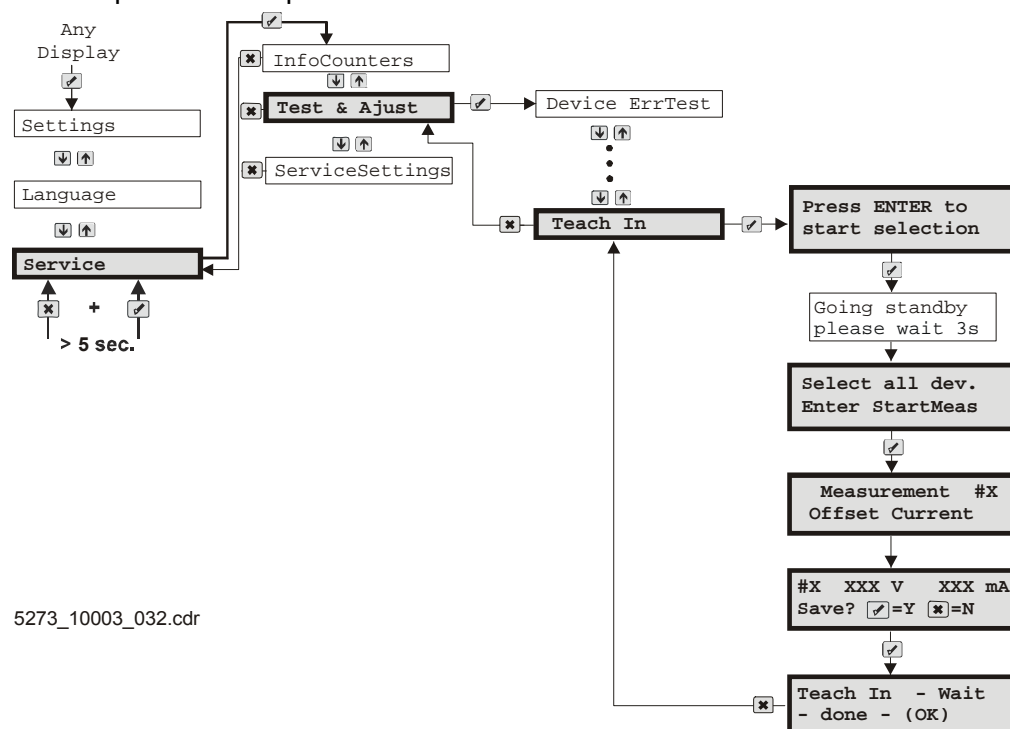


Figure 2

- Call up the menu option <Teach In>:



5273_10003_032.cdr

Figure 3

- #x = number of the consumer
- XXX V = voltage
- XXX mA = measured current
- [Y] = yes
- [N] = no (new value not yet saved, old value is kept)

- <Teach In> procedure:

| Action | Keys | Display text |
|--|------|--|
| Select the dialog window <Teach In> | [Y] | Press ENTER to start selection |
| | [Y] | Going standby please wait 3s |
| All consumers are switched off. | | Select all dev. Enter StartMeas |
| The supply voltages of the machine and the currents of the consumers are measured. | [Y] | Measurement #X Offset Current |
| The first measurement is carried out and then the result is displayed. | | #X: XXX V XXX mA Save ? [Y]=Y [N]=N |
| Save the measurement. | [Y] | #X: XXX V XXX mA |
| The next measurement is carried out. If there are no errors, current and voltage are stored in the EEPROM after ENTER. | | |
| Once all consumers have been measured and the results saved, the following message is displayed: | | Teach in - WAIT -done- (OK) |
| Exit the function. | [N] | |

4.1

Error messages

In the following cases a warning is displayed during the <Teach In>:

- The measured current value is outside the given range of values:

```
#xx WARN: aaaamA  
Range=bbbb-cccc!
```

xx = number of the consumer

aaaa = measured current

bbbb = minimum permissible value

cccc = maximum permissible value

- If the current value is measured within the given maximum measuring time, the measurement will also be aborted with an error message:

```
#xx TO:yyyy-zzzz  
ccccms >aa%/bbbb
```

xx = number of the consumer

yyyy = last current value

zzzz = actual current value

cccc = maximum measuring time

aa = max. difference of two current values in percentage

bbbb = difference of two current values, absolute value

4.2

Table of current values

| Consumer | max. diff. | Current value | | Delay time | Max. meas. time |
|------------------------------|---------------|---------------|-------|---------------|--------------------|
| | | min. | max. | | |
| Offset current | 20% | 0 | 0 | 4s | 5s |
| Solenoid valve water drain | 20% | 10mA | 200mA | 1s | 5s |
| Water supply solenoid valve | 10% | 10mA | 200mA | 1s | 5s |
| Circulation pumps | 10% | 100mA | 400mA | 0 | 5s |
| Developer replenisher pump | 10% | 50mA | 200mA | 0 | 5s |
| Fixer replenisher pump | 10% | 50mA | 200mA | 0 | 5s |
| Dryer fan | 10% | 400mA | 800mA | 2s | 5s |
| Exhaust fan low capacity | 10% | 20mA | 200mA | 10s | 10s |
| Exhaust fan high capacity | 10% | 50mA | 200mA | 10s | 20s |
| IR heater level 1 | 10% | 800mA | 1.5A | 1s | 10s |
| IR heater level 2 | 10% | 1A | 2A | 1s | 10s |
| IR heater level 3 | 10% | 1.3A | 2A | 1s | 10s |
| IR heater level 4 | 10% | 1.7A | 2.5A | 1s | 10s |
| IR heater level 5 | 10% | 2A | 3A | 1s | 10s |
| IR heater level 6 | 10% | 2.2A | 3.2A | 1s | 10s |
| IR heater level 7 | 10% | 2.5A | 3.4A | 1s | 10s |
| IR heater level 8 | 10% | 2.8A | 4A | 1s | 10s |
| IR heater level 9 | 10% | 3.3A | 4.2A | 1s | 10s |
| IR heater level 10 | 10% | 3.5A | 5A | 1s | 10s |
| Dryer convection heater | 10% | 6A | 10A | 0 | 5s |
| Heater developer | 10% | 2A | 4.5A | 0 | 5s |
| Heater fixer | 10% | 2A | 4.5A | 0 | 5s |
| Motor (standby) | - | 5mA | 400mA | 1s | 5s |

Chapter 6.3

Contents

| | | |
|----------|---|-----------|
| 1 | Operation Display..... | 1 |
| 1.1 | Status displays | 1 |
| 1.2 | Displays during heating and filling phase..... | 1 |
| 2 | Error Messages on the Display | 4 |
| 2.1 | Error messages in plaintext..... | 4 |
| 2.2 | Error display with Service numbers | 7 |
| 3 | Errors without Indication on the Display | 13 |
| 3.1 | Error indication on the synchro-motor..... | 13 |
| 3.2 | Solution heaters are not switched on..... | 14 |
| 3.3 | Faulty dryer triggering after replacement of Control Board PCB1..... | 14 |
| 4 | Internal Error Diagnosis | 15 |
| 4.1 | Flow chart | 16 |
| 4.2 | Error list for internal error diagnosis..... | 17 |
| 4.3 | Activating the internal error diagnosis via the menu <Test & Adjust> | 18 |
| 4.3.1 | <Device ErrTest> Menu | 18 |
| 4.3.2 | <Autotest> Menu..... | 19 |
| 4.4 | Repair instructions after activating an internal error diagnosis..... | 19 |

1 Operation Display

The following messages are displayed during normal operation without any problems:

1.1 Status displays

| Display | Cause and remedies |
|--------------------------------------|---|
| <div>RP XX.X °C</div> | <p>Display if the machine is NOT ready</p> <ul style="list-style-type: none"> • Machine is in heating and filling phase • Machine is in error status • ACT. display PROCESS • ACT. display developer temperature |
| <div>Ready RP 34.0 °C</div> | <ul style="list-style-type: none"> • <p>Machine is in STANDBY</p> <ul style="list-style-type: none"> • NOMINAL developer temperature has been reached • Machine is ready for film feed |
| <div>Please wait</div> | <p>Machine is in film process</p> <ul style="list-style-type: none"> • Film is in the film feed area / film area scanner |

1.2 Displays during heating and filling phase

The following STATUS messages are displayed alternately with the above mentioned display for "NOT ready":

| Display | Cause and remedies |
|---------------------------------|---|
| <div>Adding developer</div> | <ul style="list-style-type: none"> • The developer tank level is too low • Switch-on replenishment ON • Jog-cycle replenishment ON |
| <div>Adding fixer</div> | <ul style="list-style-type: none"> • The fixer tank level is too low • Switch-on replenishment ON • Jog-cycle replenishment ON |


| Display | Cause and remedies |
|---|---|
| Adding water | <ul style="list-style-type: none"> The water tank level is too low |
| Heating developer | <ul style="list-style-type: none"> The developer tank temperature is too low, the developer is heated |
| Error: | The display alternates between: <Heating developer> and <Please wait>, it does not change to <Ready>. |
| Cause: | <ul style="list-style-type: none"> The tank system is leaking. Impeller of the circulation pump runs irregularly because of dirt or damage. Drive motor of the developer circulation pump defective. |
| Remedy: | <ul style="list-style-type: none"> Check the anti-algae solenoid valve and the O-ring and replace if necessary. Check the tank shut-off valve. Clean the impeller or replace. Replace the circulation pump drive motor. |
| Cooling developer This message only occurs if developer temperature or process have been changed. | <ul style="list-style-type: none"> The developer tank temperature is too high. The developer heater remains off until the temperature is 0.1°C below NOM. temperature. Fill cold developer of the replenisher tank carefully into the developer machine tank, until ACT. temperature < NOM temperature. |
| Heating fixer | <ul style="list-style-type: none"> The fixer tank temperature is too low. The fixer is heated. |
| Emergency film Please wait | <ul style="list-style-type: none"> Emergency film processing: Emergency film is fed via the film feed. |

| Display | Cause and remedies |
|--|--|
| <div>Maintenance Please wait</div> <p>(alternating with the display <FILM> during the first 3 films always after switching on)</p> | <ul style="list-style-type: none">• The set maintenance interval has elapsed.• For setup see Chapter 6.6 Program <Service Settings> → <Maintenance> → <ServiceInterval> |

2

Error Messages on the Display



Switch off the acoustic alarm by pressing the confirmation key 

2.1

Error messages in plaintext

Emergency film processing is possible in case of the errors listed below.
Exception for emergency film processing: low level in developer, fixer, and water and the message Service 506.

The following display texts are alternately displayed with the “NOT ready” display:

| Display | Cause and remedies |
|---|--|
| MUST calibration in case of first operation: | |
| Cal Dev and Fix goto Test/Adjust | <ul style="list-style-type: none"> • The replenishment rates for developer and fixer have not yet been calibrated. • Execute the calibration (see Chapter 3, Section 9.7) |
| Cal Dev Pump goto Test/Adjust | <ul style="list-style-type: none"> • The replenishment rate for developer has not yet been calibrated. • Execute the calibration (see Chapter 3, Section 9.7) |
| Cal Fix Pump goto Test/Adjust | <ul style="list-style-type: none"> • The replenishment rate for fixer has not yet been calibrated. • Execute the calibration (see Chapter 3, Section 9.7) |
| Level check: | |
| Check EOS module | <ul style="list-style-type: none"> • Coding active although there is no EOS module connected. • Set <Service Settings> → <EOS Wash/FIX conn.??> ON <NO>. |
| Check mixer | <ul style="list-style-type: none"> • Coding activated although there is no Mixer communication connected (see Chapter 3). • Set <Service Settings> → <Mixer conn??> ON <NO>. |

| Display | Cause and remedies |
|--|--|
| Check external developer | <ul style="list-style-type: none"> • Coding activated although there is no external fixer tank connected (see Chapter 3). • The external developer replenisher tank is empty. • Set <Service Settings> → <Dev Repltnk conn. ?> on <NO>. • Fill the developer replenisher tank. |
| Check external fixer | <ul style="list-style-type: none"> • Coding activated although there is no external fixer tank connected (see Chapter 3). • The external fixer replenisher tank is empty. • Set <Service Settings> → <Fix Repltnk conn. ?> on <NO>. • Fill the fixer tank. |
| Check waste tank | <ul style="list-style-type: none"> • Developer and/or fixer disposal tanks are full. • The replenishment is immediately interrupted! • Drain the tank. |
| Check anti-algae | <ul style="list-style-type: none"> • Coding activated although there is no anti-algae unit connected. • Set <Service Settings> → <Algecid Supp Cond> on <NO>. |
| Check water pump Corresponds to <SERVICE 515> | <ul style="list-style-type: none"> • Failure of water tank circulation (option); synchro-motor 0M4 defective (see Chapter 6.3, Section 3) • Impeller fails to turn; clean the water pump! • Control Board PCB1 defective. |
| Developer level low Corresponds to <SERVICE 507> | <ul style="list-style-type: none"> • Developer tank level too low. • No developer replenisher in the tank or in the mixer. • Replenisher pump 2M1 (2M3) defective. • Check mixer and supply lines. • Check plug ST67 on the Control Board PCB1. • Level sensor LEV_1 defective. • Control Board PCB1 defective. |

| Display | Cause and remedies |
|--|---|
| <div>Fixer level low</div> <div>Corresponds to <SERVICE 508></div> | <ul style="list-style-type: none">• Fixer tank level too low.• No developer replenisher in the tank or mixer.• Replenisher pump 2M2 (2M4) defective.• Check mixer and supply lines.• Check plug ST68 and ST76 on the Control Board PCB1.• Level sensor LEV_2 or LEV_3 defective.• Control Board PCB1 defective. |
| <div>Water level low</div> <div>Corresponds to <SERVICE 507></div> | <ul style="list-style-type: none">• Level in the water tank too low.• Water supply filter is clogged!• Check water tap and supply lines.• Check plug ST69 on the Control Board PCB1.• Solenoid valve for water supply 2MG1 defective.• Level sensor LEV_4 defective.• Control Board PCB1 defective. |

2.2

Error display with Service numbers



Switch off the acoustic alarm by pressing the  key.

Emergency film processing is possible in case of the errors listed below.
Exception for emergency film processing: low level in developer, fixer, and water and the message Service 506.

The following display texts are alternately displayed with the “NOT ready” display:

| Display | Cause and remedies |
|--------------------|---|
| SERVICE 501 | <ul style="list-style-type: none"> • Developer temperature too high > 1 °C above NOM. value. • Ambient temperature too high. • Temperature sensor SENS1 defective. • Control Board PCB1 defective. |
| SERVICE 502 | <ul style="list-style-type: none"> • Developer temperature too low > 1 °C below NOM value, or temperature increase within 4 min. < 1 K. • Thermal cutout 0BE1 developer heater was triggered. • Check fuse SI 6. • Developer heater 0HEAT3 defective (checking in <TEACH IN> is possible). • Control Board PCB1 defective. |
| SERVICE 503 | <ul style="list-style-type: none"> • Fixer temperature too high (> 40 °C). • Ambient temperature too high. • Temperature sensor SENS2 defective. • Control Board PCB1 defective. |
| SERVICE 504 | <ul style="list-style-type: none"> • Fixer temperature too low (< 28 °C) • and/or temperature increase within 4 min < 1 K. • Thermal cutout 0BE2 fixer heater was triggered. • Check fuse SI 7. • Fixer heater 0HEAT2 defective (checking in <TEACH IN> is possible). • Control Board PCB1 defective. |

| Display | Cause and remedies |
|--|---|
| SERVICE 505 | <ul style="list-style-type: none"> • Dryer temperature increase within 30 sec < 2 K. • Check fuse SI 3. • Dryer convection heater 0HEAT1 / 1HEAT1 defective (checking in <TEACH IN> is possible). • Temperature sensor SENS3 defective. • Thermal cutout 0Si_HEAT1 or 1Si_HEAT1 convection heater (on the cross-flow fan) was triggered or is defective. • Control Board PCB1 defective. |
| SERVICE 506 | <ul style="list-style-type: none"> • Speed deviation of the drive motor > 50 %. • Main drive motor 0M2 0HEAT2 defective (checking in <TEACH IN> is possible). • Drive of racks / dryer sluggishness. • Control Board PCB1 defective (power supply). |
| SERVICE 507 Corresponds to <Developer level low> | <ul style="list-style-type: none"> • Developer tank level too low. • No developer replenisher in the tank or in the mixer. • Replenisher pump 2M1 (2M3) defective. • Check mixer and supply lines. • Check plug ST67 on the Control Board PCB1. • Level sensor LEV_1 defective. • Control Board PCB1 defective. |
| SERVICE 508 Corresponds to <Fixer level low> | <ul style="list-style-type: none"> • Fixer tank level too low. • No fixer replenisher in the tank or mixer. • Replenisher pump 2M2 (2M4) defective. • Check mixer and supply lines. • Check plug ST68 and ST76 on the Control Board PCB1. • Level sensor LEV_2 or LEV_3 defective. • Control Board PCB1 defective. |

| Display | Cause and remedies |
|---|---|
| SERVICE 509 Corresponds to <Water level low> | <ul style="list-style-type: none"> • Level in the water tank too low. • Water supply filter is clogged! • Check water tap and supply lines. • Check plug ST69 on the Control Board PCB1. • Solenoid valve for water supply 2MG1 defective. • Level sensor LEV_4 defective. • Control Board PCB1 defective. |
| SERVICE 514 | <ul style="list-style-type: none"> • Developer / Fix1 / Fix2 circulation not working. • Synchro-motor 0M5 / 0M6 / 0M7 defective (see also Chapter 6.3, Section 3). • Impeller fails to turn. • Control Board PCB1 defective. |
| SERVICE 515 Corresponds to <Check water pump> | <ul style="list-style-type: none"> • Failure of water tank circulation (option); synchro-motor 0M4 defective (see Chapter 6.3, Section 3) • Impeller fails to turn; clean the water pump! • Control Board PCB1 defective. |
| SERVICE 518 | <ul style="list-style-type: none"> • Developer temperature sensor SENS1 defective. • Check plug ST75 on the Control Board PCB1. • Check / replace the developer temperature sensor SENS1. |
| SERVICE 519 | <ul style="list-style-type: none"> • Fixer temperature sensor SENS2 defective. • Check plug ST78 on the Control Board PCB1. • Check / replace the fixer temperature sensor SENS2. |
| SERVICE 520 | <ul style="list-style-type: none"> • Dryer temperature sensor SENS3 defective. • Check plug ST77 on the Control Board PCB1. • Check / replace the dryer temperature sensor SENS3. |

| Display | Cause and remedies |
|--------------------|--|
| SERVICE 535 | <ul style="list-style-type: none"> Control Board PCB1 defective <p>Prior to the replacement of Control Board PCB1 check the Current Sensor Board PCB2:</p> <ul style="list-style-type: none"> Execute a <TEACH In> and compare the measured current values with the reference table (see Chapter 6.2, Section 3). If the <TEACH IN> does not produce any plausible values, the Current Sensor Board PCB2 is defective. |
| SERVICE 536 | <ul style="list-style-type: none"> Heater in developer or fixer tank cannot be switched off anymore. Control Board PCB1 defective. |
| SERVICE 539 | <ul style="list-style-type: none"> 24 V supply failed. SI9 on Control Board PCB1 defective. Control Board PCB1 defective. |
| SERVICE 549 | <ul style="list-style-type: none"> Current Sensor Board PCB2 defective. Check the Current Sensor Board PCB2: Execute a <TEACH In> and compare the measured current values with the reference table (see Chapter 6.2, Section 3). If the <TEACH IN> does not produce any plausible values, the Current Sensor Board PCB2 is defective. |
| SERVICE 550 | <ul style="list-style-type: none"> Main drive motor 0M2 defective (checking in <TEACH IN> is possible). |
| SERVICE 555 | <p>Synchro-motor monitoring of the fixer 1 circulation pump:</p> <ul style="list-style-type: none"> Synchro-motor 0M6 defective Pump impeller blockage |
| SERVICE 556 | <p>Synchro-motor monitoring of the fixer 2 circulation pump:</p> <ul style="list-style-type: none"> Synchro-motor 0M5 defective Pump impeller blockage |

| Display | Cause and remedies |
|--------------------|--|
| SERVICE 557 | <p>Synchro-motor monitoring of the developer circulation pump:</p> <ul style="list-style-type: none"> • Synchro-motor 0M7 defective • Pump impeller blockage |
| SERVICE 558 | <p>Synchro-motor monitoring of the water circulation pump (option):</p> <ul style="list-style-type: none"> • Synchro-motor 0M4 defective • Pump impeller blockage |
| SERVICE 559 | <ul style="list-style-type: none"> • Power supply for synchro-motor of the circulation pumps interrupted • Check supply cables (checking in <TEACH IN> is possible). |
| SERVICE 562 | <ul style="list-style-type: none"> • Check fuse SI 1. • Fixer replenisher pump 2M2 defective (checking in <TEACH IN> is possible). |
| SERVICE 563 | <ul style="list-style-type: none"> • Check fuse SI 1. • Developer replenisher pump 2M1 defective (checking in <TEACH IN> is possible). |
| SERVICE 574 | <ul style="list-style-type: none"> • Problem in the infrared heater • Thermal 0Si_IR1-out BE2 has reacted • Check fuse SI 5. • Dryer motor 0M1 or 1M1 defective (checking in <TEACH IN> is possible). • Control Board PCB1 defective. |
| SERVICE 575 | <ul style="list-style-type: none"> • Problem at the dryer cross-flow fan • Check SI 1. • Check socket 6 (motor 0M1 / 1M1). • Dryer motor 0M1 or 1M1 defective (checking in <TEACH IN> is possible). • Control Board PCB1 defective. |
| SERVICE 579 | <ul style="list-style-type: none"> • Exhaust fan motor 1M2 defective (checking in <TEACH IN> is possible). • Control Board PCB1 defective. |

| Display | Cause and remedies |
|--------------------|--|
| SERVICE 580 | <ul style="list-style-type: none">• Solenoid valve for water supply 2MG1 defective (checking in <TEACH IN> is possible).• Control Board PCB1 defective. |
| SERVICE 582 | <ul style="list-style-type: none">• Solenoid valve for water drain 2MG2 defective (check in <TEACH IN> is possible).• Control Board PCB1 defective. |

3 Errors without Indication on the Display

3.1 Error indication on the synchro-motor

The function can be checked at LED (2) on the synchro-motor of the circulation:

| | | |
|---------|----------------------|---|
| LED ON | Synchro-motor (1) OK | |
| LED OFF | ERROR | <ul style="list-style-type: none"> • Synchro-motor (1) defective • 24 V power supply missing • Impeller (5) in pump (4) blocks |

- 1: Synchro-motor
- 2: Fault display
- 3: Position of the assembly within the housing
- 4: Pump housing
- 5: Impeller

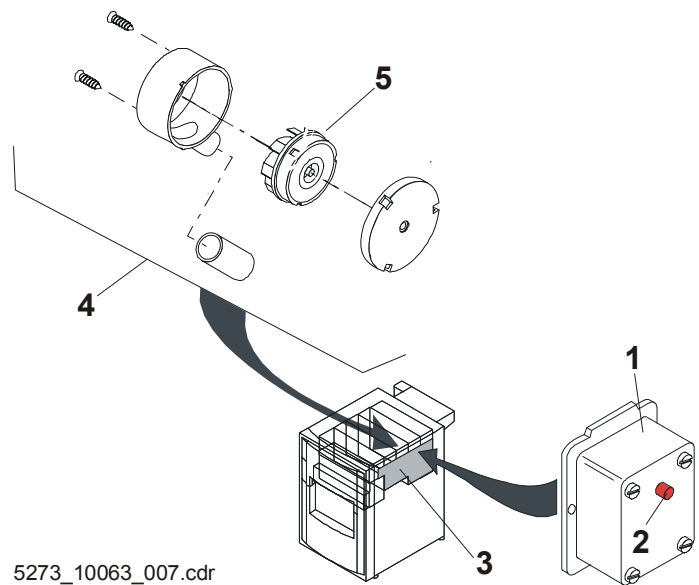


Figure 1

3.2 Solution heaters are not switched on

| | |
|----------------|---|
| Error: | Although the levels seem to be reached, the solution heaters are not switched on. |
| Cause: | Brief dropping of the water level in the heater delay time of max. 4min. The replenisher pumps stop until the water level is reached again and the circulation starts, the level drops again. The cause for this level drop in the water may be a leaking anti-algae solenoid valve or a defective O-ring at the tank drain taps. |
| Remedy: | Check the anti-algae solenoid valve and the O-ring and replace if necessary. |



The anti-algae solenoid valve may get leaks as a result of chlorine used in the water tank.

3.3 Faulty dryer triggering after replacement of Control Board PCB1

| | |
|----------------|---|
| Error: | After replacement of the Control Board PCB1, dryer step 1 is triggered at a too high nominal voltage and the trigger voltage of dryer step 13 (10) is too low. |
| Cause: | After replacement of the PCB1 board the three wires protective earth (PE), neutral (N), and phase (L) must be correctly connected on the terminal block XK1. As the assignment of the wires on the terminal block is not marked, neutral (N), and phase (L) were mixed up during the installation of the new board, and thus the dryer steps were triggered the wrong way round. |
| Remedy: | Correct the wiring of Control Board PCB1 (see Chapter 6.5). |

4

Internal Error Diagnosis

If certain errors occur during operation (listing of errors: see Chapter 4.2) the internal error diagnostic is started. The display does not yet show an error. By means of internal tests the machine software tries to determine the error cause more detailed.

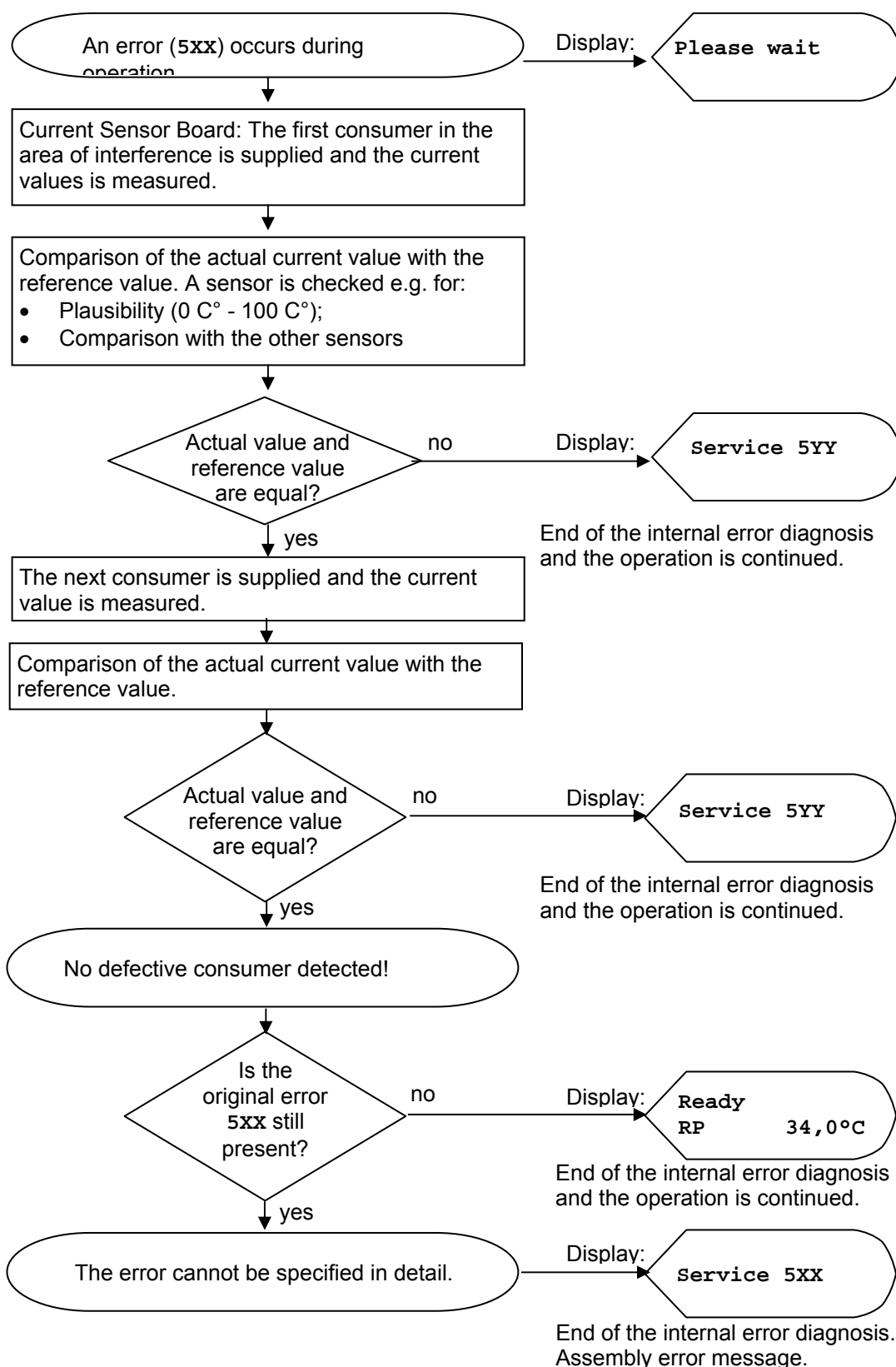


**The error diagnostics will not START during FILM CYCLE or Service 506!
The procedure of an internal error diagnosis may take up to 4 minutes
until the error is displayed.**

If it was possible to specify or locate the error cause by an internal error diagnosis, the corresponding service will be displayed. Otherwise the original service number or the corresponding plaintext is displayed.

4.1

Flow chart



4.2

Error list for internal error diagnosis

The internal error diagnostics routine is started in case of the following errors:


| Service number | Error description | Possible results of the internal diagnosis |
|--------------------|---|--|
| SERVICE 501 | Dev. temperature too high > 1 °C above NOM. value. | Service 501, 518, 535, 536, 549 |
| SERVICE 502 | Dev. temperature too low > 1 °C below NOM value, or temperature increase within 4 min. < 1 K | Service 502, 518, 535, 536, 549 |
| SERVICE 503 | Fixer temperature too high (> 40°C) | Service 503, 519, 535, 536, 549 |
| SERVICE 504 | Fixer temperature too low (<28°C) or temperature increase within 4 min. < 1 K | Service 504, 519, 535, 536, 549 |
| SERVICE 505 | Temperature increase in the dryer within 30sec. <2K | Service 505, 520, 535, 536, 549 |
| SERVICE 506 | Speed deviation of the drive motor > 50%. | Service 506, 549, 550 |
| SERVICE 507 | Developer level too low | Service 507, 549, 562 |
| SERVICE 508 | Fixer level too low | Service 508, 549, 563 |
| SERVICE 509 | Water level too low | Service 509, 535, 539, 549, 580, 582 |
| SERVICE 514 | Developer / Fix1 / Fix2 circulation not working. | Service 514, 535, 539, 549, 555, 556, 557, 558 |
| SERVICE 515 | Water circulation not working | Service 515, 535, 539, 549, 555, 556, 557, 558 |

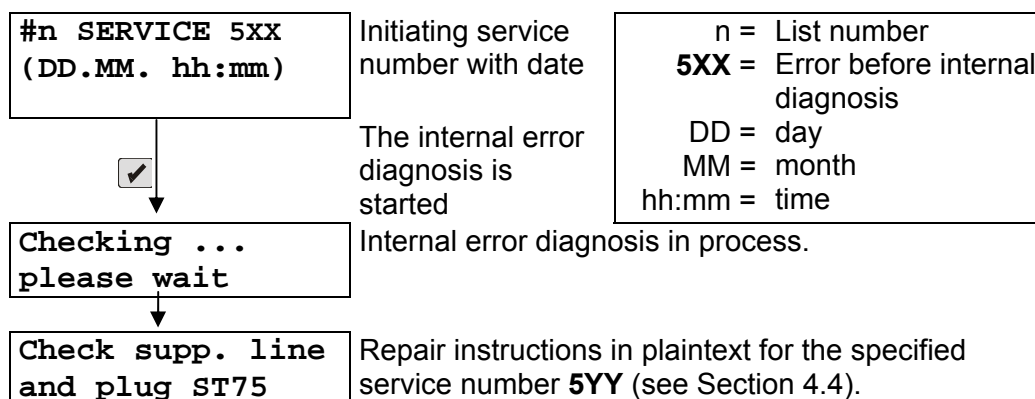
| Service number | Error description | Possible results of the internal diagnosis |
|--------------------|--------------------------------|--|
| SERVICE 574 | Problem in the infrared heater | Service 535, 549, 574 |
| SERVICE 579 | Problem in the exhaust fan | |

4.3 Activating the internal error diagnosis via the menu <Test & Adjust>

4.3.1 <Device ErrTest> Menu

The <Test & Adjust> <Device ErrTest> menu shows a listing of the errors **5XX** (see Chapter 4.2), which initiated the internal error diagnosis. It is possible that current errors are only added to the list by switching the machine off and on.

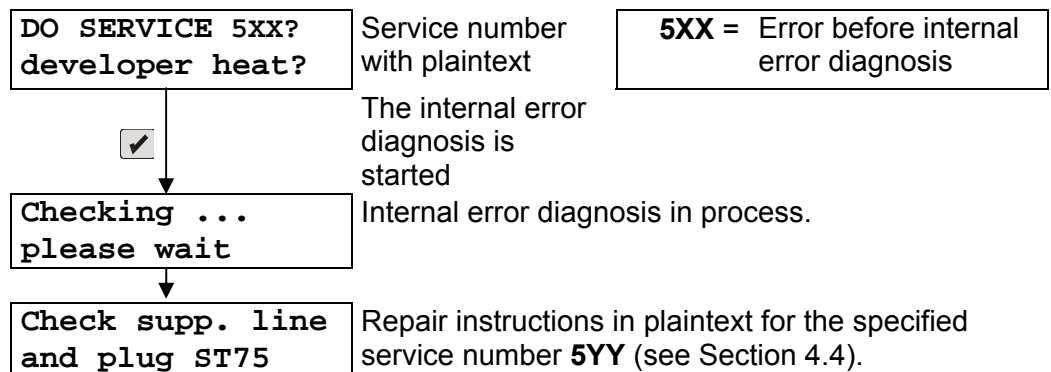
The internal error diagnosis can also be started manually with the confirmation key . Once the internal error diagnosis has been completed, repair instructions are displayed.



4.3.2

<Autotest> Menu

By means of the functions in the menu <Test & Adjust> <Autotest> <Test single id> all error diagnostics routines for the errors **5XX** can be started individually.



The function <Test all autom.> starts all diagnostics routines one after the other.

4.4

Repair instructions after activating an internal error diagnosis

After activating the internal error diagnosis in the menu <Test & Adjust> <Device ErrTest> or <Autotest> the diagnosis results are displayed in plaintext. The plaintext messages correspond to the following service numbers:

| Plaintext | Service number |
|------------------------------------|----------------|
| Check BE1, Si6, HZ3, GS1 | SERVICE 501 |
| Check BE1, Si6, HZ3, GS1 | SERVICE 502 |
| Check BE2, Si7, HZ2, GS1 | SERVICE 503 |
| Check BE2, Si7, HZ2, GS1 | SERVICE 504 |
| Check Si1,1Si1 Si3,HZ1,1Hz1,GS1 | SERVICE 505 |

| Plaintext | Service number |
|--------------------------------------|----------------|
| -- | SERVICE 506 |
| Check ST67,DEV sensor, hose. | SERVICE 507 |
| Check level sens for bridging,GS1 | SERVICE 507 |
| GS1 defect all sens. incorrect | SERVICE 507 |
| Check ST68,FIX1 sensor, hose. | SERVICE 508 |
| Check ST76,FIX2 sensor, hose. | SERVICE 508 |
| Check level sens for bridging,GS1 | SERVICE 508 |
| GS1 defect all sens. incorrect | SERVICE 508 |
| Check ST69,WAT sensor, hose. | SERVICE 509 |
| Short circuit sensor, GS1 | SERVICE 509 |
| GS1 defect all sens. incorrect | SERVICE 509 |
| -- | SERVICE 514 |

| Plaintext | Service number |
|------------------------------------|----------------|
| -- | SERVICE 515 |
| Check sensor DEV line ST75 | SERVICE 518 |
| Check sensor FIX line ST78 | SERVICE 519 |
| Check sensor WAT line ST77 | SERVICE 520 |
| GS1 defect | SERVICE 535 |
| No supply 24V1 GS1 defect | SERVICE 535 |
| No supply 24V2 GS1 defect | SERVICE 535 |
| 24V1 faulty GS1 defect | SERVICE 535 |
| 24V2 faulty GS1 defect | SERVICE 535 |
| AllSens Out Of Range GS1 defect | SERVICE 535 |
| GS1 defect current too high | SERVICE 535 |
| GS1 def. Output constant on | SERVICE 536 |

| Plaintext | Service number |
|--------------------------------------|----------------|
| 24V1 faulty M4-M7,GS1 defect | SERVICE 539 |
| Supply line M4-M7,GS1 defect | SERVICE 539 |
| Current too high M4-M7,GS1 defect | SERVICE 539 |
| No 24V supply Si9,GS1 defect | SERVICE 539 |
| Motor M4-M7 defect | SERVICE 539 |
| CurrentSens defect | SERVICE 549 |
| M2 too slow check M2, GS1 | SERVICE 550 |
| M1 too fast check M2, GS1 | SERVICE 550 |
| Check SI8,M2 GS1 BU4, GS1 | SERVICE 550 |
| Revolut. Detect. 0M7 defect | SERVICE 555 |
| Check impeller 0M7 defect | SERVICE 555 |
| Revolut. Detect. 0M6 defect | SERVICE 556 |

| Plaintext | Service number |
|-------------------------------------|----------------|
| Check impeller 0M6 defect | SERVICE 556 |
| Revolut. Detect. 0M5 defect | SERVICE 557 |
| Check impeller 0M5 defect | SERVICE 557 |
| Revolut. Detect. 0M4 defect | SERVICE 558 |
| Check impeller 0M4 defect | SERVICE 558 |
| -- | SERVICE 559 |
| Check line_30M1 30M1, GS1 defect | SERVICE 562 |
| Check SI1,GS1 | SERVICE 562 |
| Check line_30M2 30M2, GS1 defect | SERVICE 563 |
| Check SI1,GS1 | SERVICE 563 |
| IR1, 1IR1, Si5 GS1 Si3 defect | SERVICE 574 |
| GS1 defect, Si9 ST4 to 0M1/1M1 | SERVICE 575 |

| Plaintext | Service number |
|--------------------------------------|----------------|
| 0M1 or 1M1 defect | SERVICE 575 |
| Supply line 1M2 1M2, GS1 defect | SERVICE 579 |
| Fan blocked GS1 defect | SERVICE 579 |
| Check line 30MG2 30MG2,GS1 defect | SERVICE 580 |
| Check line 30MG1 30MG1,GS1 defect | SERVICE 582 |

Chapter 6.4

Contents

| | | |
|----------|--------------------------------|----------|
| 1 | Control Board PCB1..... | 1 |
|----------|--------------------------------|----------|

1

Control Board PCB1

CM+952709450 (F8.5270.7890)

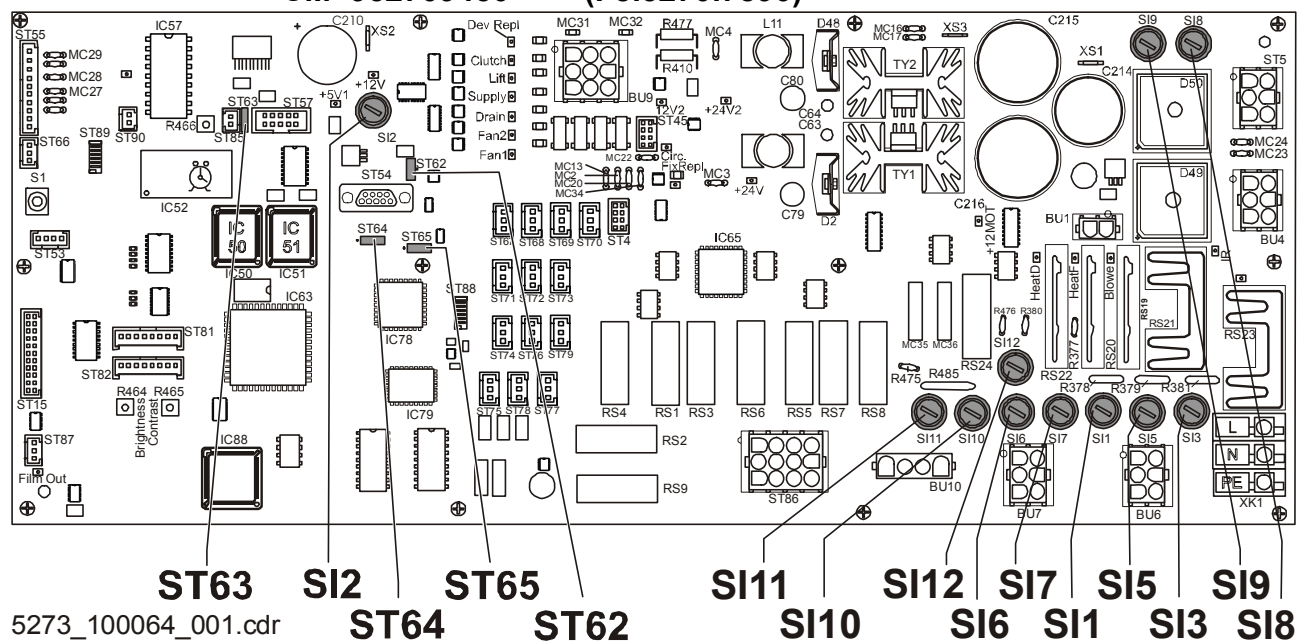


Figure 1

| Designation | Value | Description |
|-------------|-------------|--|
| SI1 | 1 A slow | Dryer fan 0M1 / 1M1 Replenisher pumps developer 2M1 / fixer 2M2 |
| SI2 | 1.25 A slow | +12V2 DC |
| SI3 | 10 A slow | Dryer convection heater 0HEAT1 / 1HEAT1 |
| SI5 | 6.25 A slow | Dryer infrared heater 0IR1 / 1IR1 |
| SI6 | 6.25 A slow | Developer heater 0HEAT3 |
| SI7 | 6.25 A slow | Fixer heater 0HEAT2 |
| SI8 | 6.25 A slow | +24V DC |
| SI9 | 6.25 A slow | +24V1 / +24V2 / +42 V DC |
| SI10 | 10 A slow | 230 VAC mains supply primary side |
| SI11 | 10 A slow | 208 VAC mains supply primary side |
| SI12 | 10 A slow | 200 VAC mains supply primary side |

| Plug | ST62 | ST63 | ST64 | ST65 |
|------|------|------|------|------|
| Code | open | open | open | open |

Chapter 6.5**Contents**

| | | |
|-----------|---|-----------|
| 1 | Panels..... | 1 |
| 2 | Removal and Installation of the Main Drive | 2 |
| 2.1 | Removing the lower horizontal shaft..... | 3 |
| 2.2 | Removing the vertical shaft..... | 5 |
| 2.3 | Removing the upper horizontal shaft | 5 |
| 2.4 | Installing the upper horizontal shaft..... | 6 |
| 2.5 | Installing the vertical shaft | 7 |
| 2.6 | Installing the lower horizontal shaft | 8 |
| 2.7 | Adjusting the bevel gears | 11 |
| 3 | Replacing the Dryer Convection Heater with Thermal Cutout..... | 12 |
| 4 | Replacing the Dryer Infrared Heater..... | 13 |
| 5 | Replacing the Bracket of the Infrared Heater | 14 |
| 6 | Control Board PCB1..... | 15 |
| 6.1 | Replacing the Control Board PCB1 | 15 |
| 6.1.1 | Preparations..... | 15 |
| 6.1.2 | Replacement of PCB1..... | 16 |
| 6.2 | Replacing the clock chip IC52 | 18 |
| 6.3 | Replacing the EPROMs IC50 and IC51 | 19 |
| 7 | Current Sensor Board PCB2 | 20 |
| 8 | Calibrating the Developer Temperature (CAL) | 21 |
| 9 | Replacing the Circulation Pumps | 22 |
| 10 | Layout of Developer, Fixer, and Water Rack | 23 |
| 10.1 | Roller diagram | 23 |
| 10.2 | Listing / illustration of all rollers | 24 |
| 10.3 | Guide plate diagram | 25 |

| | | |
|-------------|--|-----------|
| 10.4 | Guide plates | 26 |
| 10.5 | Gear diagram | 27 |
| 10.6 | Listing / illustration of all gears | 28 |

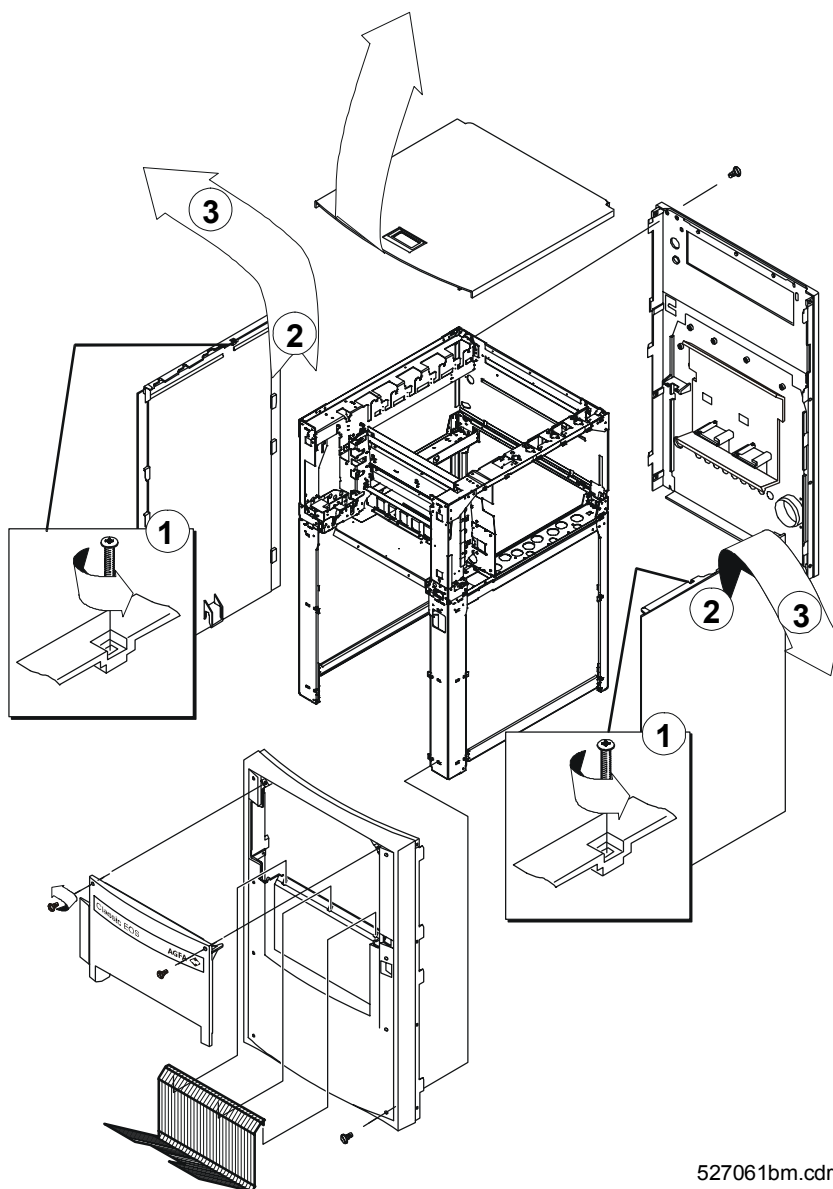
1

Panels



Disconnect the machine from the mains before starting any maintenance and/or repair activities. If a mains connection is absolutely necessary this maintenance and repair work must only be made by specially trained personnel.

For correct removal of panels refer to the illustration below.
Attach the panels and covers in reverse order for light tight connection.



527061bm.cdr

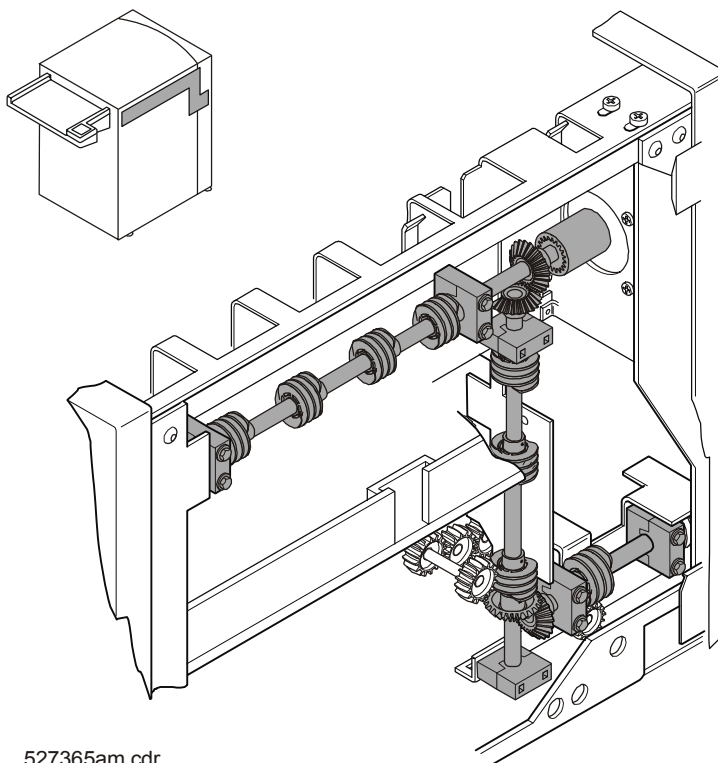
Figure 1

2

Removal and Installation of the Main Drive

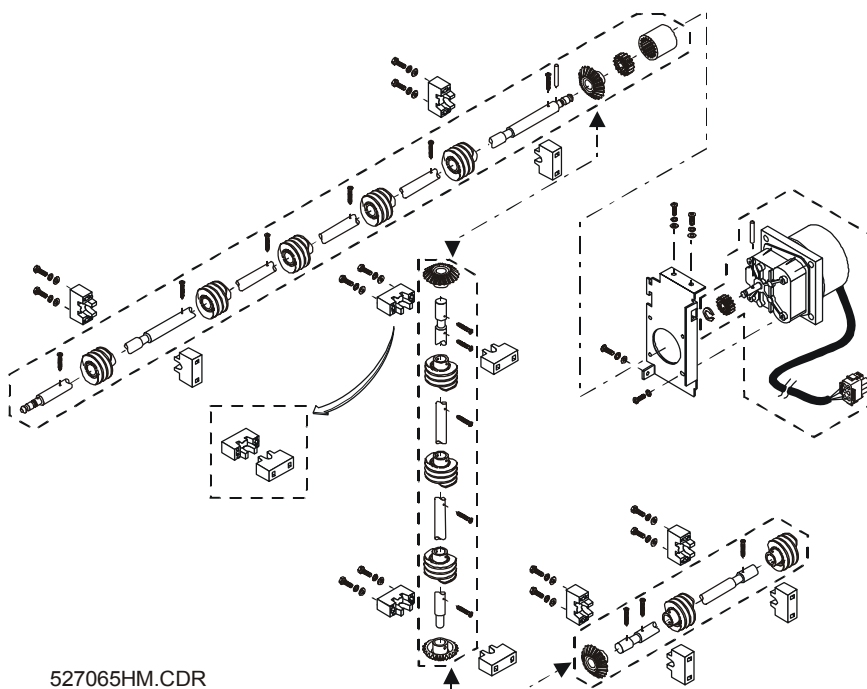


Socket wrench (size 7), medium size Phillips screwdriver



527365am.cdr

Figure 2



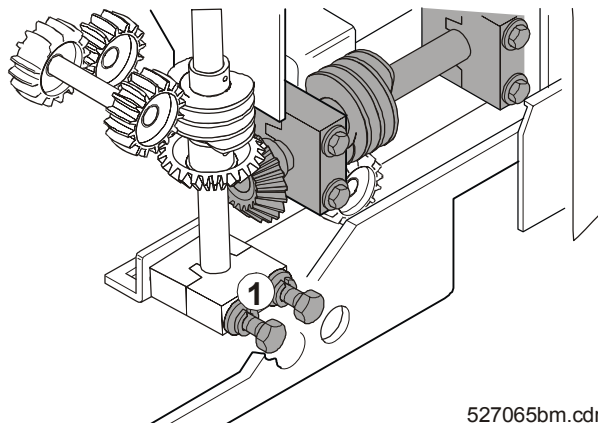
527065HM.CDR

Figure 3

2.1

Removing the lower horizontal shaft

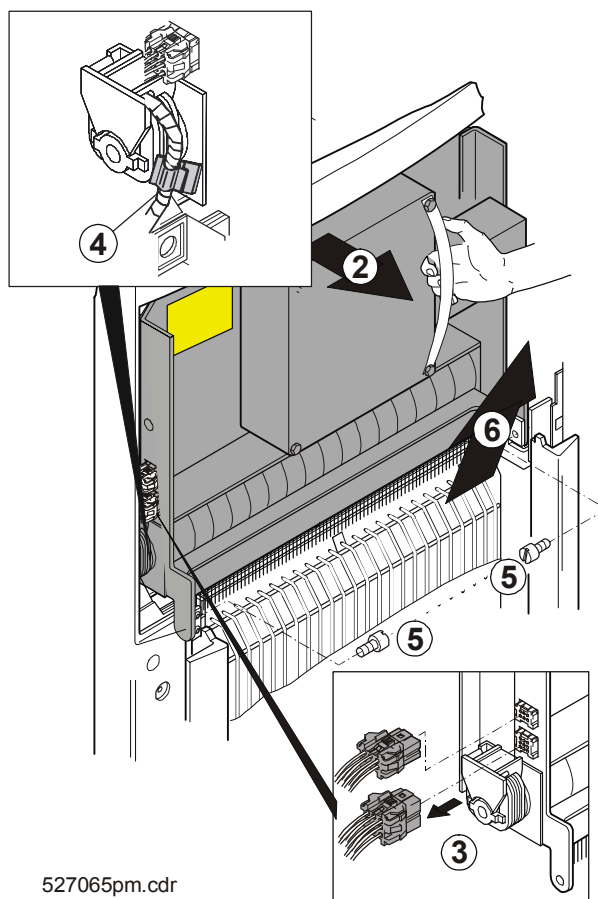
- Remove the cover and the right hand side panel.
- Loosen the two screws (1) at the bearing of the vertical shaft.



527065bm.cdr

Figure 4

- Dismount the rear panel.
- Open the dryer flap (2).
- Unplug connections (3).
- Unthread the cables from the cable ties (4).
- Undo the screws (5).
- Remove the dryer flap (6).



527065pm.cdr

Figure 5

- Remove the two lower roller pairs (7) and (8).

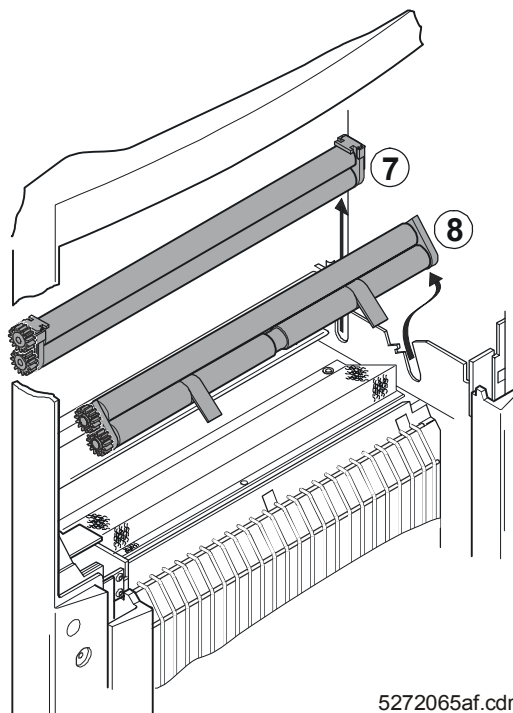


Figure 6

- Undo the screws (9), (10) and (11).
- Tilt the complete unit (12) (shaft and bracket) to open it and remove it towards the dryer.

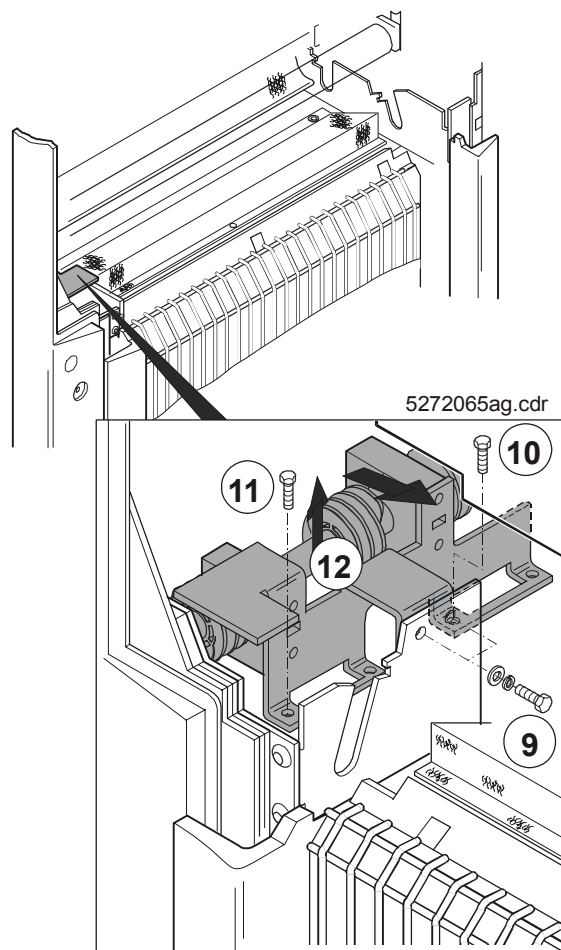


Figure 7

2.2 Removing the vertical shaft

- Undo the screws (1) and (2).
- Remove the vertical shaft.

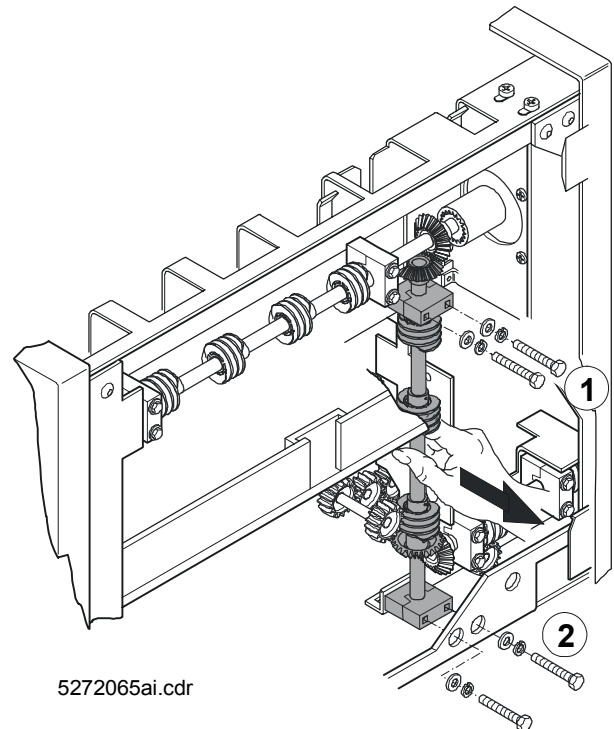


Figure 8

2.3 Removing the upper horizontal shaft

- Undo the screws (1) and (2).
- Disconnect motor (3) (by pushing it in the direction of the arrow).
- Undo the screws (4) and (5).
- Remove the horizontal shaft.

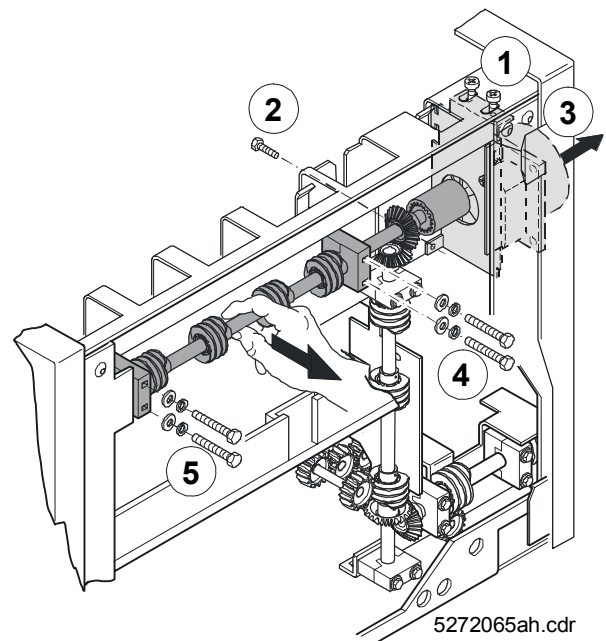


Figure 9

2.4 Installing the upper horizontal shaft

- Push the motor to stop position towards the horizontal shaft and fasten it with the screws (1) and (2).
- Check if the horizontal shaft has some axial play in the direction of the motor.
- If there is no axial play: loosen the motor mounting screws and push motor (3) by approx. 1 mm against the direction of the arrow.
- Fasten screws (1) and (2).

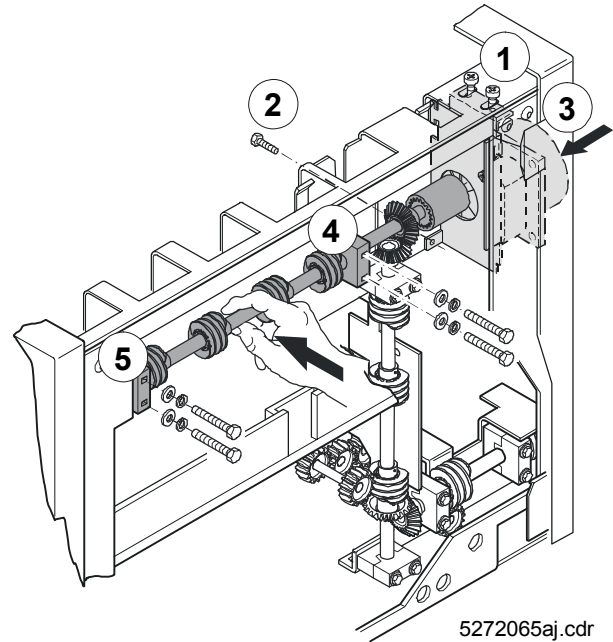


Figure 10



The bevel gears between the horizontal and the vertical shaft must be aligned (see Chapter 6.5, Section 2.7)

The fixed bearing (4) determines the alignment.

2.5

Installing the vertical shaft

- Fit the complete shaft.
- Fasten screws (1) and (2).

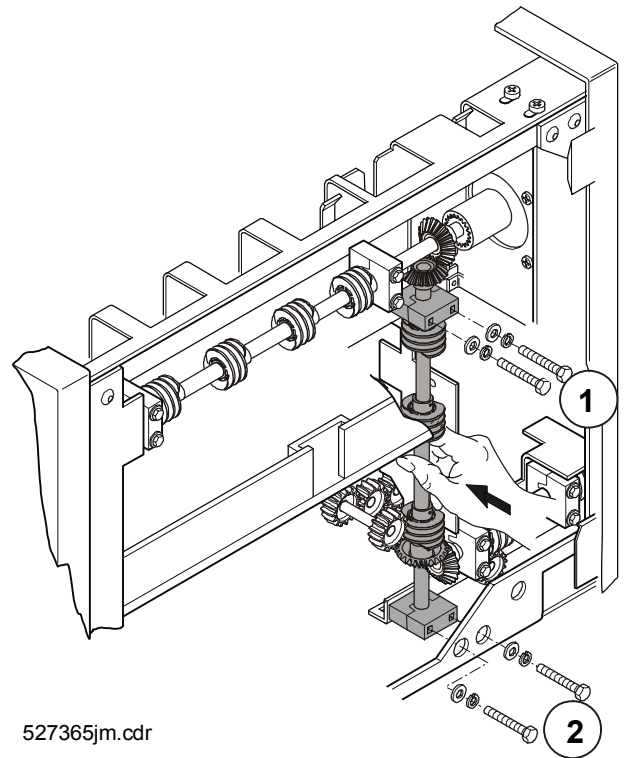


Figure 11



The bevel gears between the horizontal and the vertical shaft must be aligned (see Chapter 6.5, Section 2.7)

2.6

Installing the lower horizontal shaft

- Insert the complete unit (1) (shaft and bracket).
- Fasten screws (2) and (3).

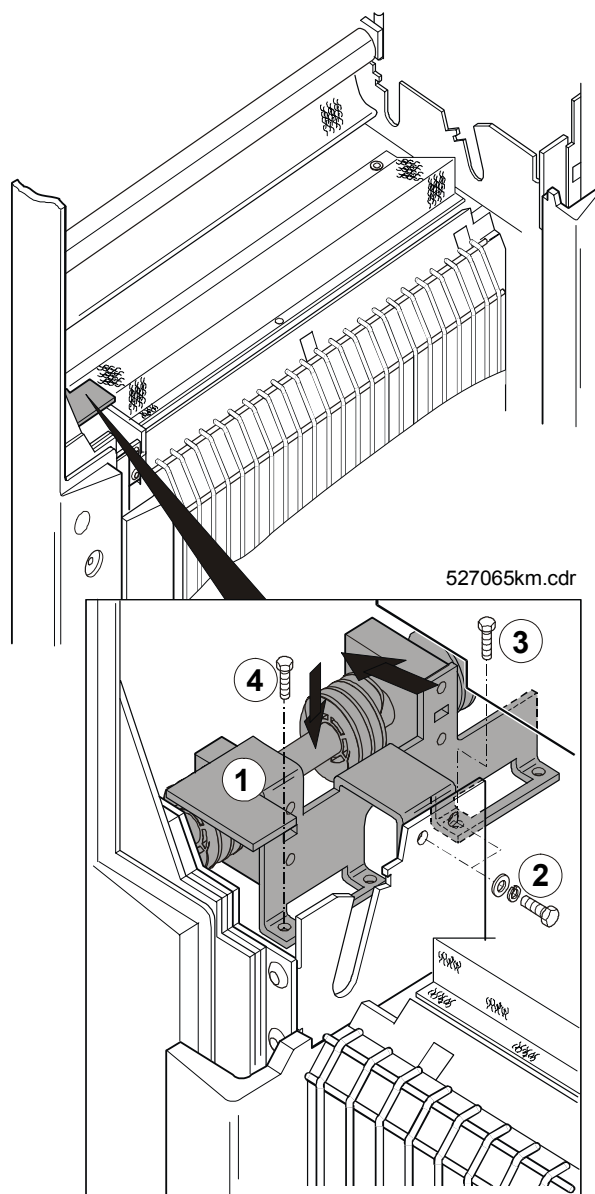


Figure 12

- Tighten the two screws (5).

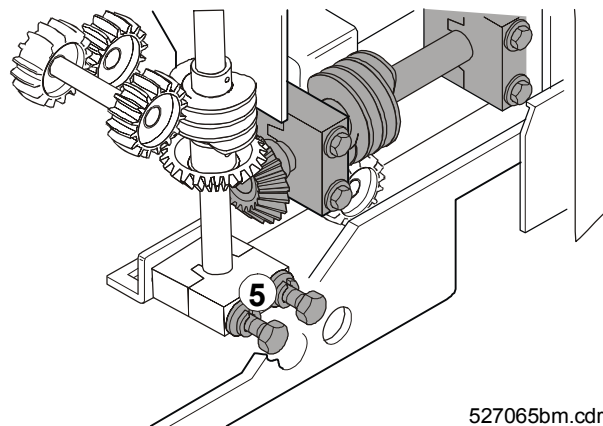
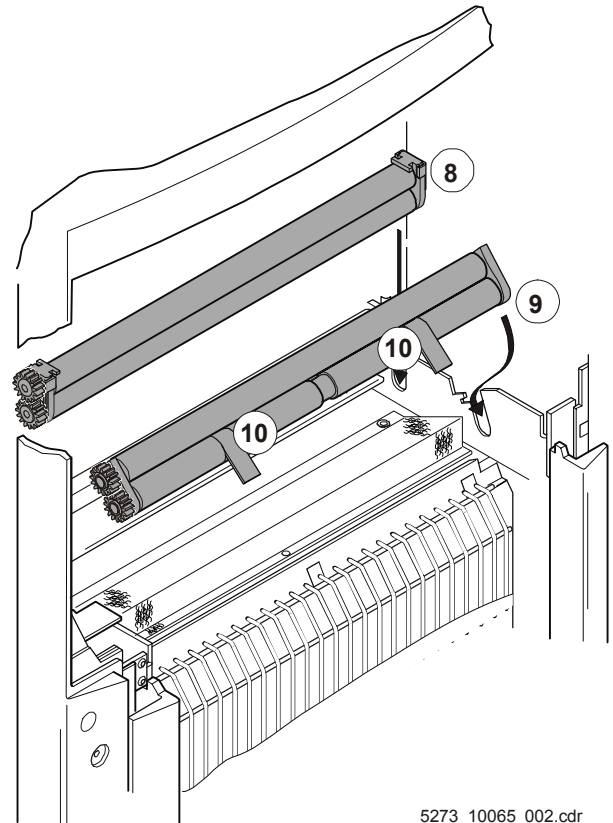


Figure 13

- Insert the two roller pairs (8) and (9).



5273_10065_002.cdr

Figure 14



If the clips (10) on the red roller are not correctly mounted, the rollers will block!

- Insert the dryer flap.
- Fasten the dryer flap with screws (1).
- Connect the plugs (2).
- Fasten the cables in the cable tie (3).
- Close the dryer flap (4).
- Mount the rear panel.
- Mount the side panels.
- Mount the cover.

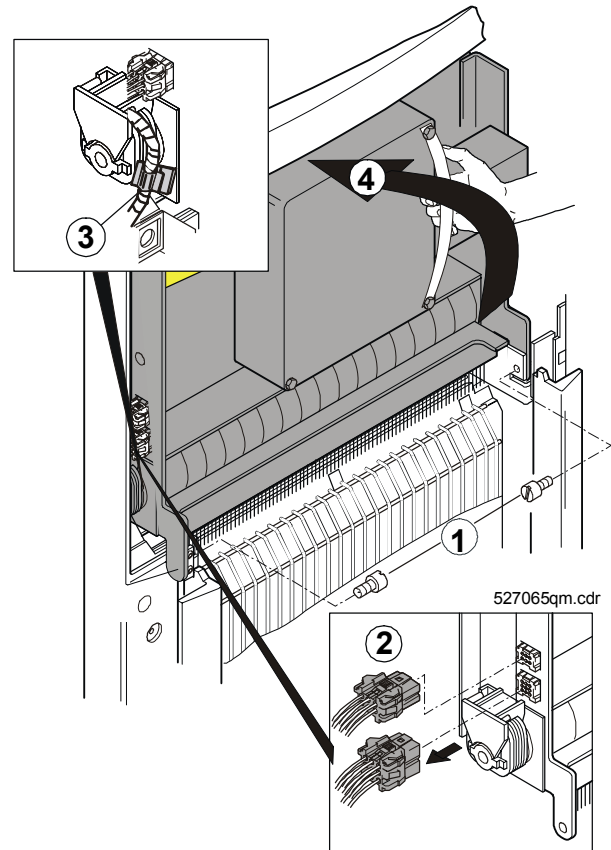


Figure 15



The bevel gears between the horizontal and the vertical shaft must be aligned (see Chapter 6.5, Section 2.7)!

2.7

Adjusting the bevel gears

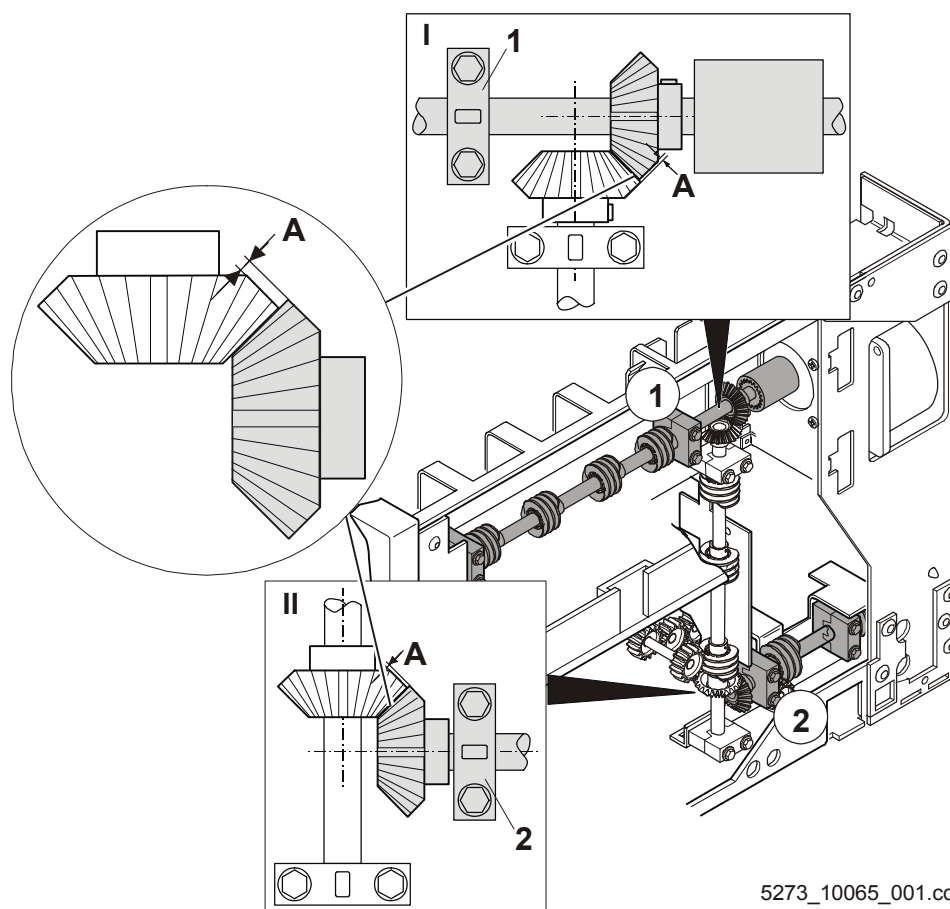


Figure 16

The bevel gears must be aligned. Displacement (A) on the bevel gears must not exceed 0.5 mm.



Adjustment of the vertical shaft is not required.

- Adjustment of the upper horizontal shaft or the bevel gears pair I is made on the bearing (1).
- Adjustment of the lower horizontal shaft or the bevel gears pair II is made on the bearing (2).

3

Replacing the Dryer Convection Heater with Thermal Cutout



Large screwdriver, medium Phillips screwdriver, medium screwdriver

- Disconnect the machine from the mains.
- Remove the top cover and the side panels.
- Unplug the 3-wire control cable (1) at the heater.

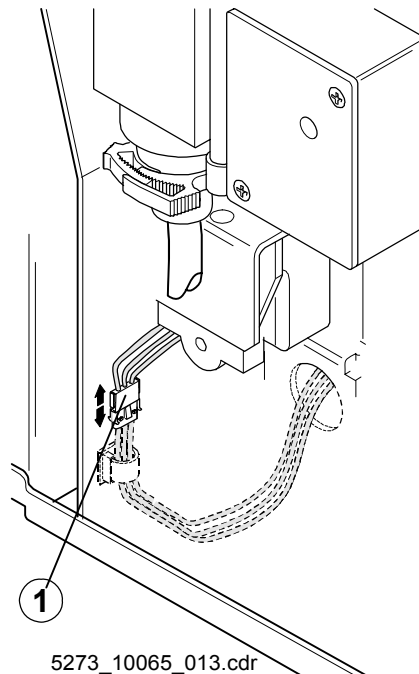


Figure 17

- Undo screw (2) and fold down PCB1 (3).
- Undo the screws (4).
- Pull out the convection heater (5) with thermal cutout (7) and unplug the 5-wire supply cable (6).

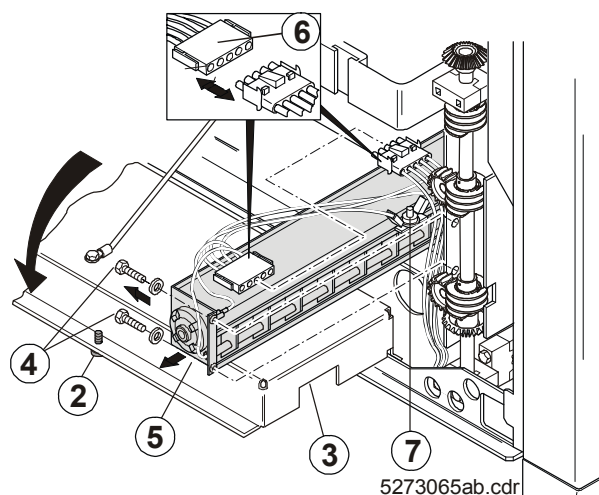


Figure 18

- Insert the new convection heater carefully.
- For further assembly proceed in reverse order.
- Connect the machine to the mains and switch on.
- Execute the TEACH IN procedure (see Chapter 6.2).

4

Replacing the Dryer Infrared Heater



Large screwdriver, medium Phillips screwdriver

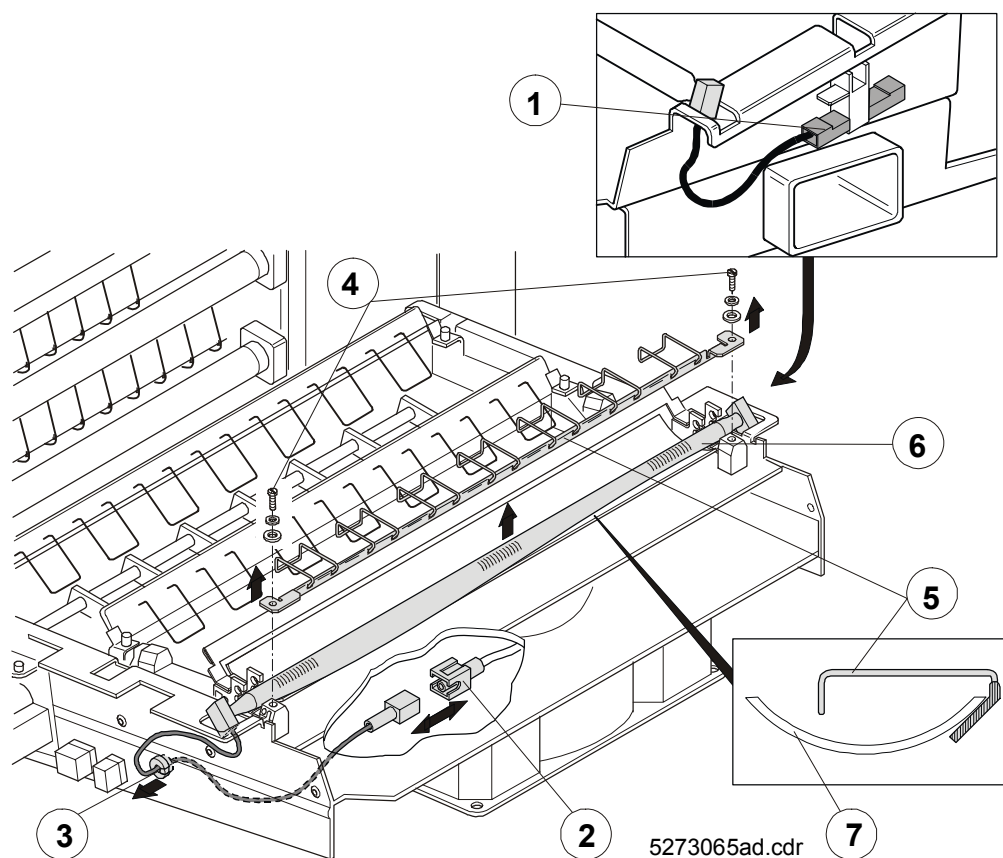


Figure 19

- Disconnect the machine from the mains.
- Dismount the rear panel.
- Open the dryer flap.
- Unplug the single-wire supply cable (1) and unthread it from the cable ties.
- Disconnect plug (2).
- Open the cable passage (3) and unthread the cable.
- Undo the screws (4) of the protection wire bracket (5) and remove the wire bracket.
- Pull the infrared heater (6) out of its holder.
- Insert the new infrared heater in the holder.
- Mount the wire bracket (5) on the reflector (7). The wire bracket must be outside the reflector!
- For further assembly proceed in reverse order.
- Connect the machine to the mains and switch on.
- Execute the TEACH IN procedure (see Chapter 6.2).

5

Replacing the Bracket of the Infrared Heater



Slide caliper or feeler gage, large screwdriver, medium Phillips screwdriver

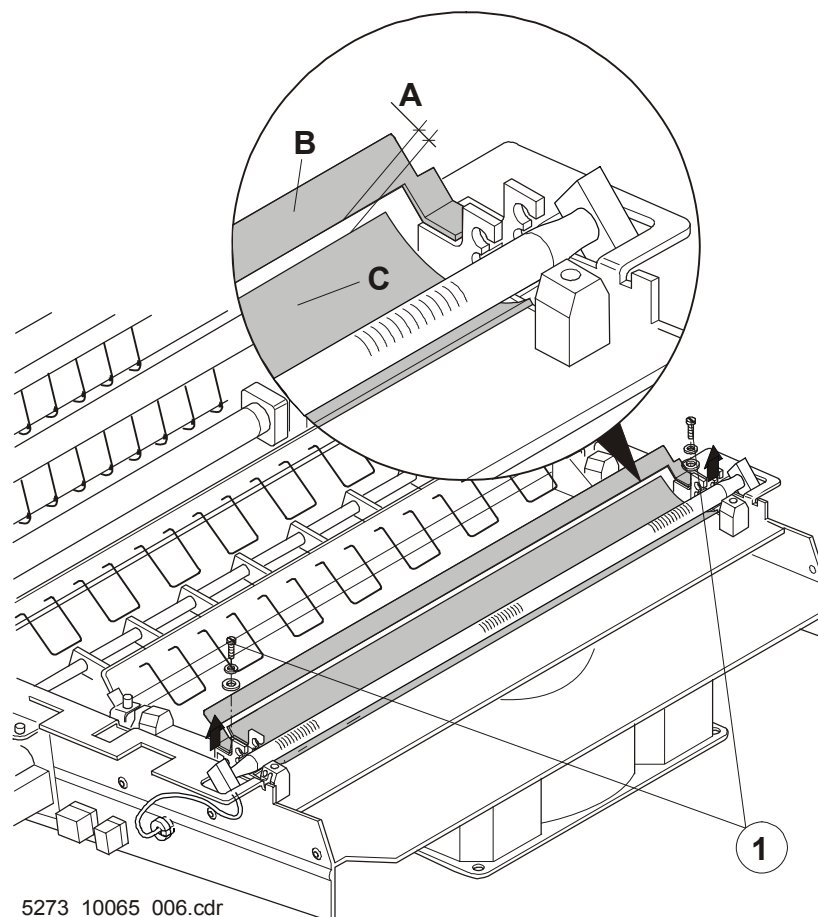


Figure 20

- Disconnect the machine from the mains.
- Remove the film chute and the rear panel.
- Open the dryer flap.
- Undo the screws (1) and remove the bracket.
- Insert the new bracket and connect the two screws (1).
- Adjust the space (A) between bracket (B) and reflector (C): The distance (A) must be 3.0 (+0.5) mm.
- Tighten screw (1) and check the distance again.
- Close the dryer flap: Ensure that the bracket does not touch the dryer rollers!
- Mount the panels.
- Connect machine to power.



If the distance is less than 3.0 mm, drying errors may occur (wave lines in film transport direction).

6 Control Board PCB1



Parts number of the Control Board: CM+952709450
(Label on board: F8.5270.7890._)



Observe the remarks about repairs on printed circuit boards in Chapter 6.1.

6.1

Replacing the Control Board PCB1



Large screwdriver, medium and small screwdriver

All operation relevant data is saved in the chips IC50, IC51, IC52, and IC79 on the Control Board. By replacement of the complete board this information is lost. Specifically:

| Module | Data |
|----------------------|--|
| EPROMs IC50, IC51 | Machine software |
| Clock chip IC52 | Calibration status of replenishment rates Calibration values of replenishment rates Processed film Expiration date for the maintenance interval Hours of operation Management of the error hit list |
| EEPROM IC79 | All values and settings of the <Service Settings> menu List of detected problems (device error, error hit list) |

6.1.1

Preparations

A BASEINIT is made after replacement of Control Board PCB1, i.e. all settings saved EEPROM (IC79) are reset to default. Therefore make sure to make the following preparations **before** replacement:

- Call up **<Quick Display>**
<Service Settings> → **<Quick Display>**
- Write down all SETTINGS to re-enter them after replacement of the board (see Chapter 3).

6.1.2

Replacement of PCB1

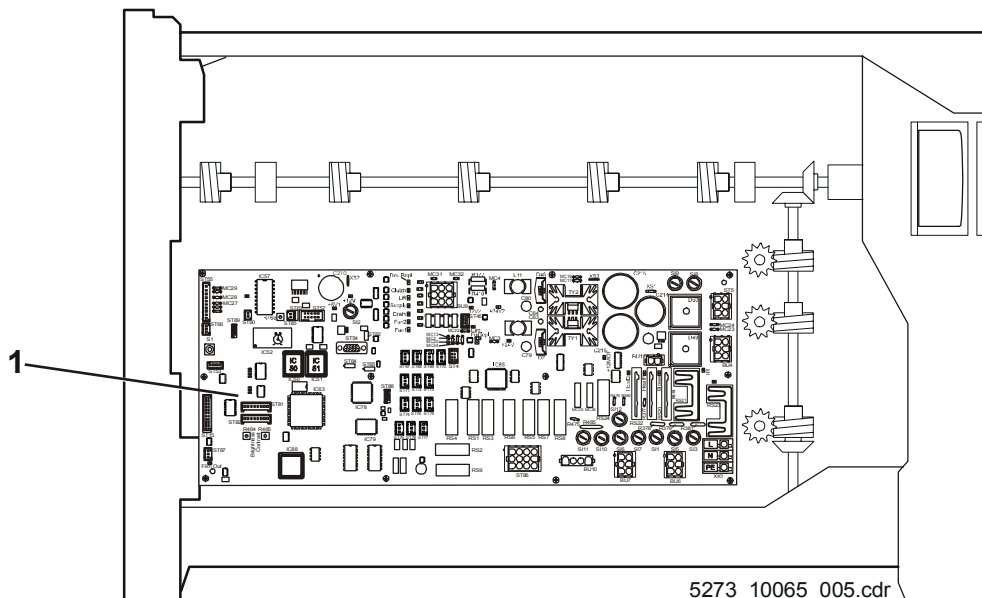


Figure 21

- Switch off machine and disconnect from mains.
- Remove top cover and side panels on the right.
- Unplug all cables on Control Board PCB1 (1).
- Undo the 12 screws on the Control Board PCB1.
- Remove the Control Board from the machine.
- Insert the new Control Board and fasten with 12 screws.
- Connect all cables;
ensure correct connection of the three wires for protective earth (PE) ,
neutral (N), and phase (L) on terminal strip XK1:

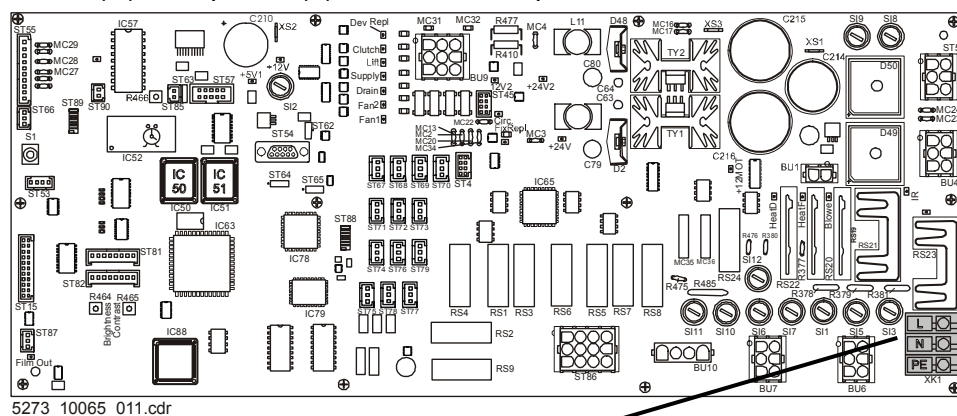
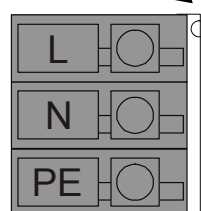


Figure 22

The wires must be connected as follows on
the terminal strip XK1 on PCB1:



- | | | | |
|---|-----------------------|---|-------------------|
| 1 | L = phase | ➔ | brown wire |
| 2 | N = neutral | ➔ | blue wire |
| 3 | PE = protective earth | ➔ | green-yellow wire |

5270_10013_002.cdr

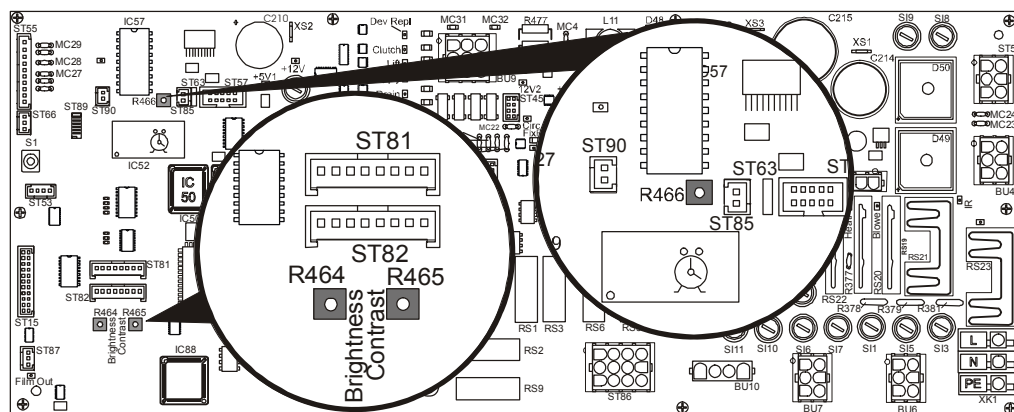
- Take EPROMs IC50 and IC51 (Software CLLC1107 and up) from the old board and mount them on the new board (replacement see Chapter 6.5).



Control Board CM+952709450 (F8.5270.7890._) is only compatible with Software CLLC1107 and up.

- Adjust the volume of the buzzer, and brightness and contrast of the display (control panel) with the potentiometers on the Control Board PCB1.

| | |
|--------------------|------|
| Buzzer volume | R466 |
| Display brightness | R464 |
| Display contrast | R465 |



CM+952709450_ (F8.5270.7890._)

5273_10003_029.cdr

- Mount the covers and panels again.
- Connect machine to power.
- Press both arrow keys and hold them until the machine switches on. This resets all temporary and non-temporary infocounters to zero (second operator required, see Chapter 6.2).
- Calibrate the replenishment rates (only if you use the clock chip of the new board) (see Chapter 3).
- Select the application (see Chapter 3). After modification of the application a machine reset with BASEINIT is executed automatically. The display is temporarily blank and then switches to Ready display.
- Execute a **<Teach In>** (Chapter 6.2).
- Proceed with all further settings in **<Service Settings>**:
The values noted before can be re-entered now (see Chapter 3). So the machine will work again in the previous mode.

6.2 Replacing the clock chip IC52



Large and small screwdriver, medium Phillips screwdriver

The following information is stored in the clock chip:

Calibration status of replenishment rates
Calibration values of replenishment rates
Processed film
Expiration date for the maintenance interval
Hours of operation
Management of the error hit list

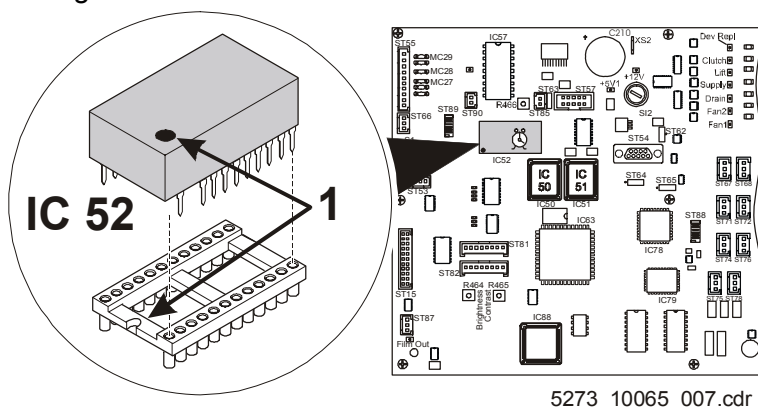


Figure 23

- Switch off machine and disconnect from mains.
- Remove top cover and side panels on the right.
- Carefully lift clock chip IC52 out of its socket using a small screwdriver.
- Insert the new clock chip according to the socket notch (1) in the **correct position**. Carefully place the pins on the socket and do not distort the chip when pressing it down!
- Mount the covers and panels again.
- Connect machine to power.
- Press both arrow keys and hold them until the machine switches on. This resets all infocounters to zero (second operator required, see Chapter 6.2).
- Calibrate the replenishment rates (see Chapter 3).
- Set the clock again (see Chapter 3).
- Check the function.

6.3

Replacing the EPROMs IC50 and IC51



Large screwdriver, medium Phillips screwdriver,
extraction tool for PLC housings (CM+9999910050).

A BASEINIT is made after replacement of the machine software, i.e. all settings saved in EEPROM (IC79) are reset to default. Therefore make sure to make the following preparations **before** replacement:

- Call up <Quick Display>
<Service Settings>→<Quick Display>
- Write down all SETTINGS to re-enter them after replacement of the software.

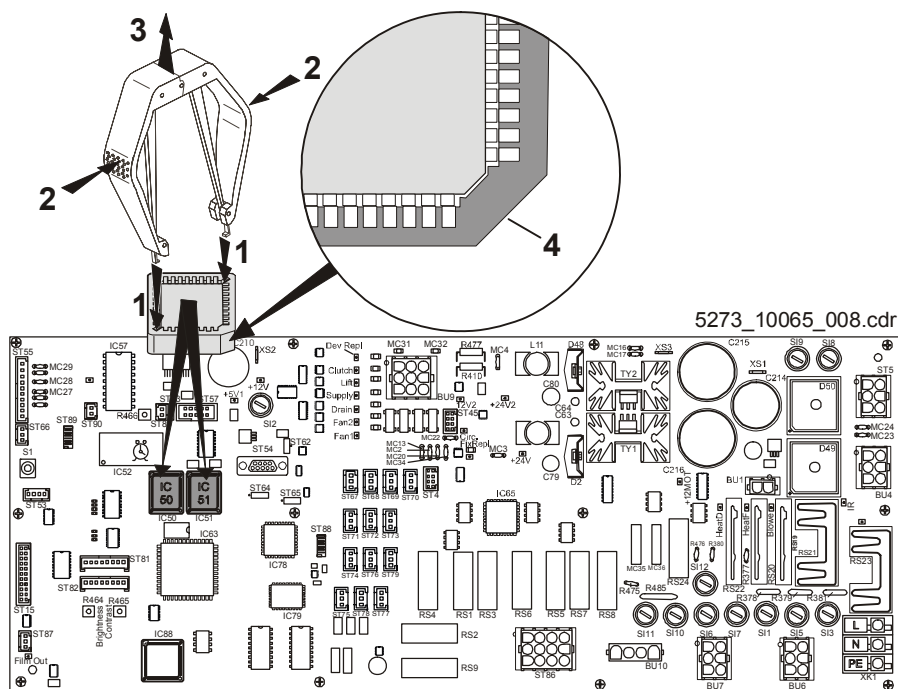


Figure 24

- Switch off machine and disconnect from mains.
 - Remove top cover and side panels on the right.
 - Pull the EPROMs IC50 and IC51 out of their sockets using the extraction tool for PLCC housings. (Sequence of actions: 1, 2, 3).
 - Insert the EPROMS according to the socket notch (4) in the correct position.
 - Mount the covers and panels again.
 - Connect the machine to the mains and switch on.
 - Select the application (see Chapter 3).
- After modification of the application a machine reset with BASEINIT is executed.
- Make all further settings in **<Service Settings>** (Chapter 3). The values noted before can be re-entered now. So the machine will work again in the previous mode.

7

Current Sensor Board PCB2



Large and medium screwdriver, medium Phillips screwdriver

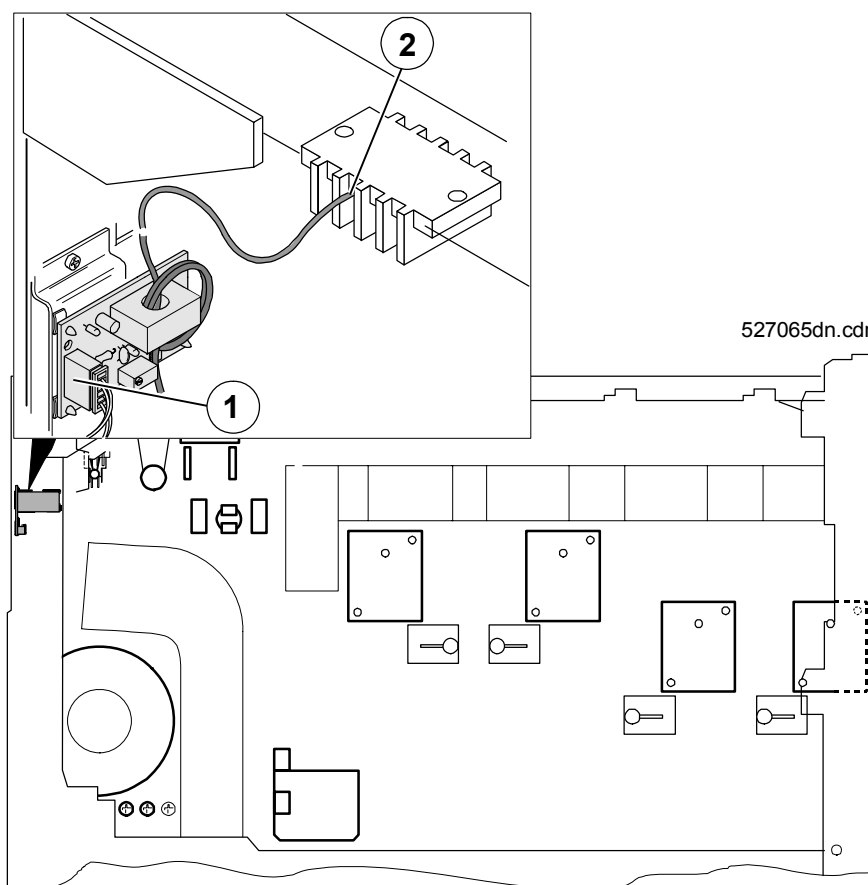


Figure 25

Switch off machine and disconnect from mains.

Remove top cover and side panels on the left.

- Unplug ST2 (1).
- Open the cable tie (2).
- Remove the Current Sensor Board PCB2 from the holder.
- Unthread the cable from the current sensor.
- Thread the cable from below through the new current sensor with **2 windings**.



Only one winding around the ring magnet results in incorrectly detected current values and thus in an error message (Service 549).

- Insert current sensor PCB2 in the holder.
- Plug in ST2 (1).
- Screw the cable to the cable terminal (2).

Mount the covers and panels again.

- Connect the machine to the mains and switch on.

Execute the <TEACH IN> procedure (see Chapter 6.2).

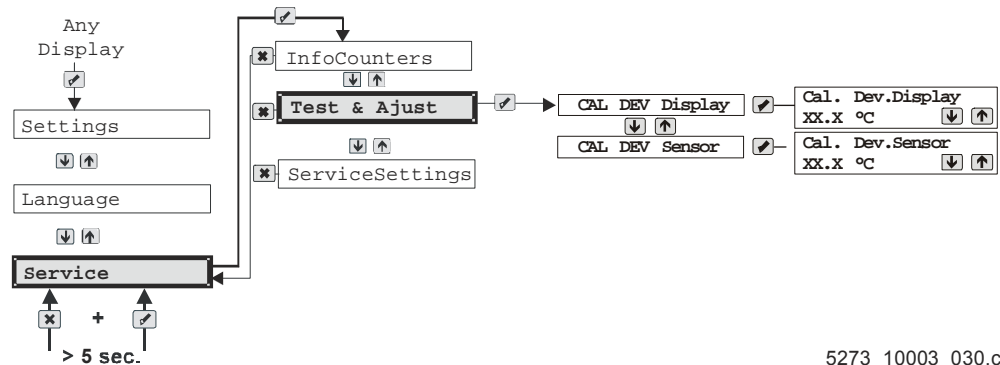
8

Calibrating the Developer Temperature (CAL)



Thermometer up to 50°C CM+9999902910

After replacement of the developer temperature sensor the sensor must be calibrated. The developer temperature sensor can be calibrated with the **<CAL DEV Sensor>**. The adjustment range is +/- 1 °C in steps of 0.1 °C.



5273_10003_030.cdr

Figure 26

- Measure the developer temperature with the thermometer and check.
- Enter the resulting temperature under SERVICE program **<CAL DEV Sensor>**.
- Use the function **<CAL DEV Display>** to adapt the temperature indication on the display. The adjustment range is +/- 1 °C in steps of 0.1 °C.

9

Replacing the Circulation Pumps



Only install **blue** pumps
(CM+9521026200) in this system.

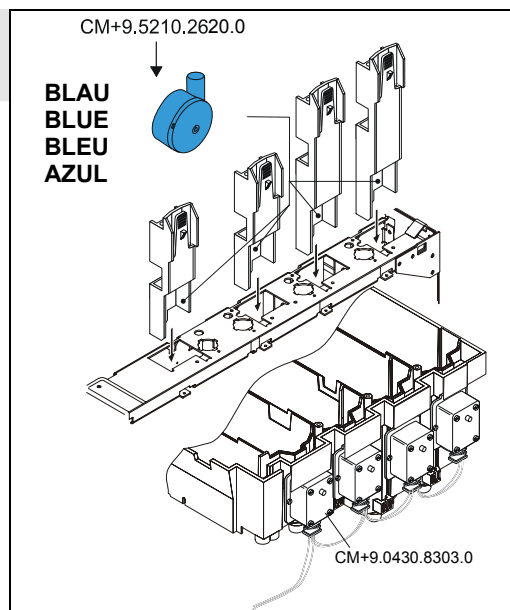


Figure 27



In the blue pumps the bearing bushes, special disk, and impeller shaft are made of ceramic material.

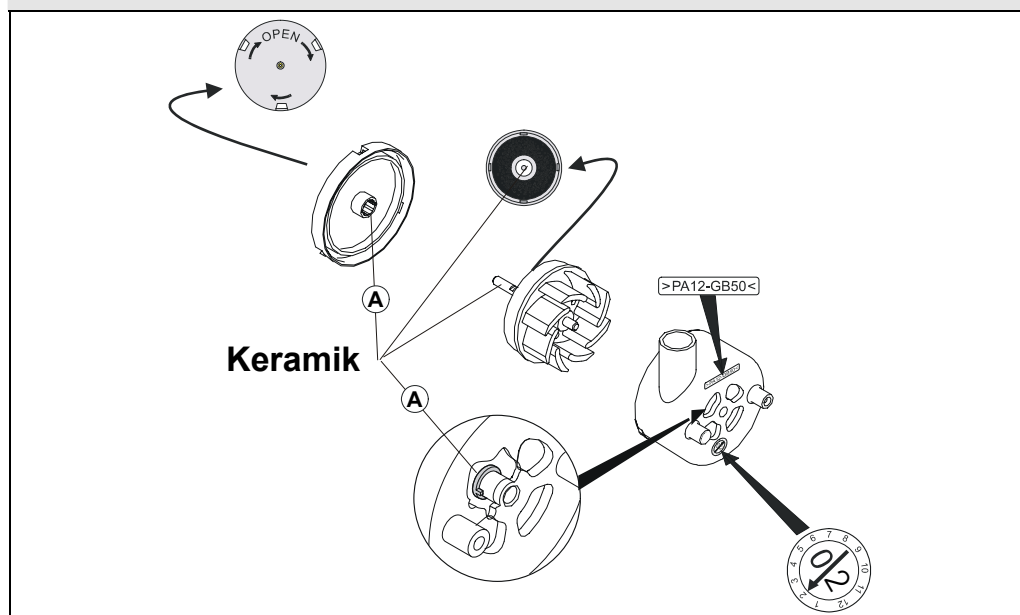


Figure 28



Pump repair possibility

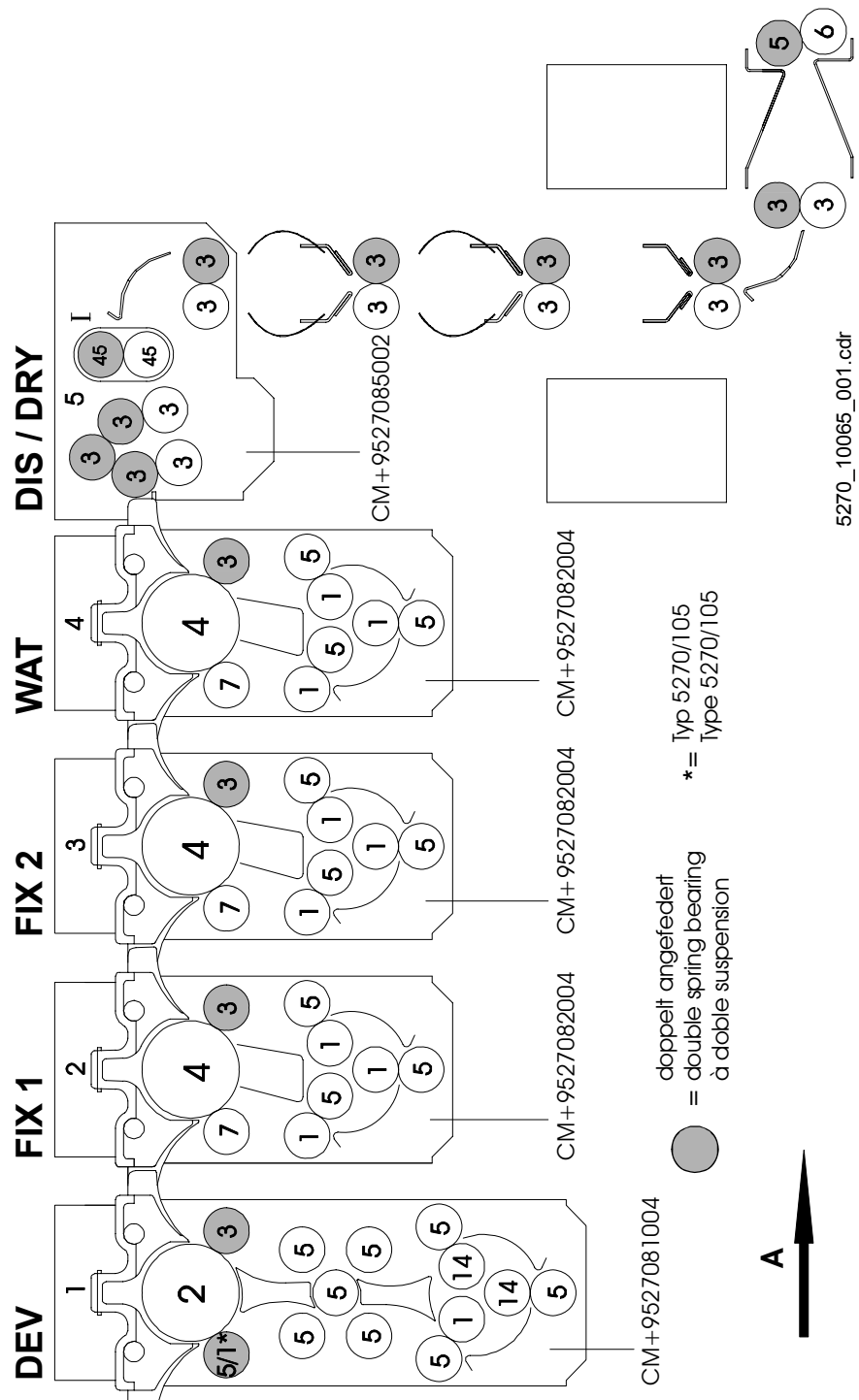
- We do not stock any spare parts for these pumps!
- The pump is considered a wear part and must be replaced as a complete unit!

10

Layout of Developer, Fixer, and Water Rack












10.1

Roller diagram



10.2

Listing / illustration of all rollers

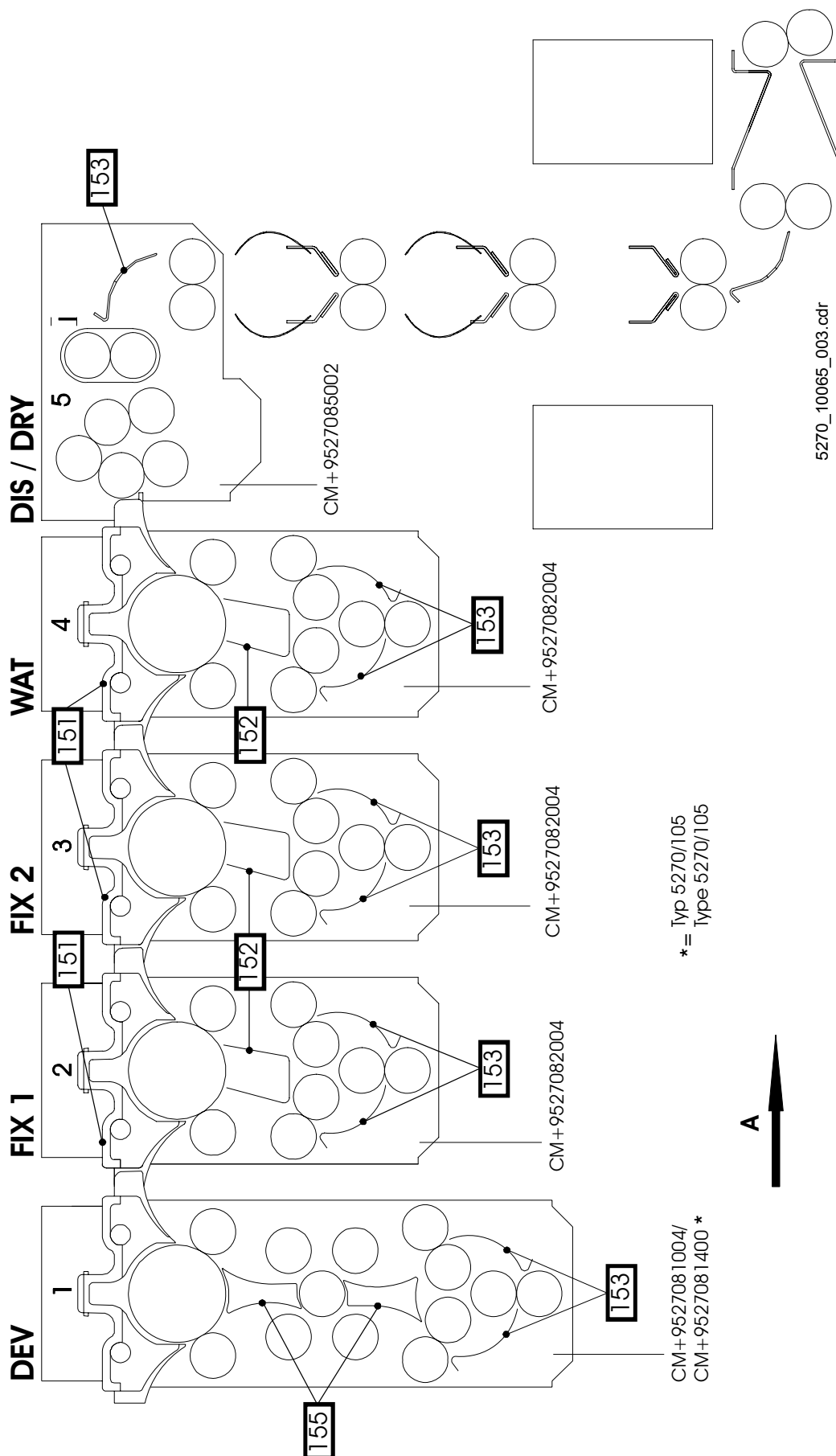
| | | | | | | |
|----|---------------|------|-------|--------------------|--|---------------|
| 1 | CM+9520051501 | 22,5 | ALU | Grey Rubber |  | CM+9520051422 |
| 2 | CM+9520051602 | 48 | ALU | Grey Rubber |  | CM+9520051422 |
| 3 | CM+9522061501 | 22,5 | STEEL | Grey Rubber |  | CM+9520051422 |
| 4 | CM+9520054202 | 48 | ALU | Yellow-PU polished |  | CM+9520051422 |
| 5 | CM+9520054304 | 22,5 | ALU | Yellow-PU polished |  | CM+9520051422 |
| 6 | CM+9521060682 | 22,6 | | Red Rubber |  | CM+9520051412 |
| 7 | CM+9520054403 | 22,5 | ALU | Yellow-PU rough |  | CM+9520051422 |
| 14 | CM+9521083601 | 22,8 | STEEL | Grey Rubber |  | CM+9520051422 |
| 45 | CM+9527085700 | 22,5 | STEEL | Foam Rubber |  | |
| | | | | |  | CM+9520051412 |
| | | | | |  | CM+9520051422 |

5270_10065_002.cdr

Rollers with aluminum pipe core (ALU) and rollers with steel pipe core (STEEL), they can be differentiated by their different weights.





10.3

Guide plate diagram



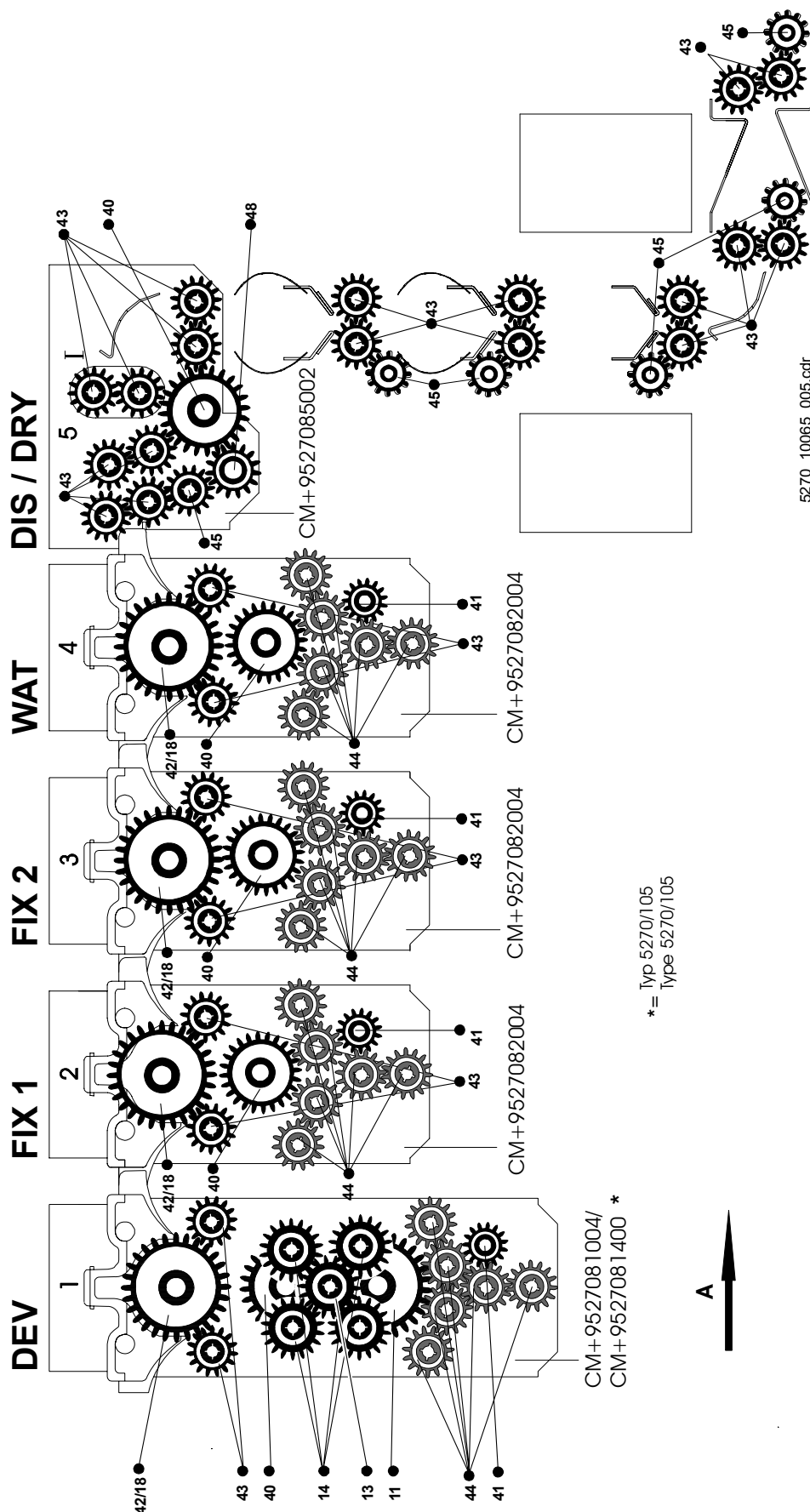
10.4

Guide plates

| | | Part number | Guide plate |
|---|------------|---------------|------------------------|
|  | 151 | CM+9520055011 | Guide plate, top |
|  | 152 | CM+9522056041 | Guide plate, middle |
|  | 153 | CM+9520056032 | Guide plate, crossover |
|  | 155 | CM+9520051164 | Guide plate, middle |

10.5

Gear diagram



10.6 Listing / illustration of all gears

| | | | |
|----|--|---------------|---|
| 18 | | CM+9520051311 | z=24 Sw $\varnothing=52.36$ mm |
| 41 | | CM+9520051380 | z=15 Sw $\varnothing=25.5$ mm |
| 45 | | CM+9521027362 | Z=11 Sw $\varnothing=26.17$ mm bzw. Z=15 Sw $\varnothing=25.5$ mm |
| 11 | | CM+9520051340 | z=28 Sw $\varnothing=44.7$ mm |
| 43 | | CM+9520051321 | z=15 Sw $\varnothing=25.5$ mm |
| 44 | | CM+9521081320 | z=15 Gr $\varnothing=24.7$ mm |
| 48 | | CM+9839180760 | z=15 Sw $\varnothing=25.5$ mm |
| 42 | | CM+9520051350 | z=32 Sw $\varnothing=51$ mm |
| 40 | | CM+9520051330 | z=24 Sw $\varnothing=39$ mm |
| 13 | | CM+9520051360 | z=18 Sw $\varnothing=29.72$ mm |
| 14 | | CM+9520051370 | z=18 Sw $\varnothing=29.72$ mm |

5270_10065_006.cdr

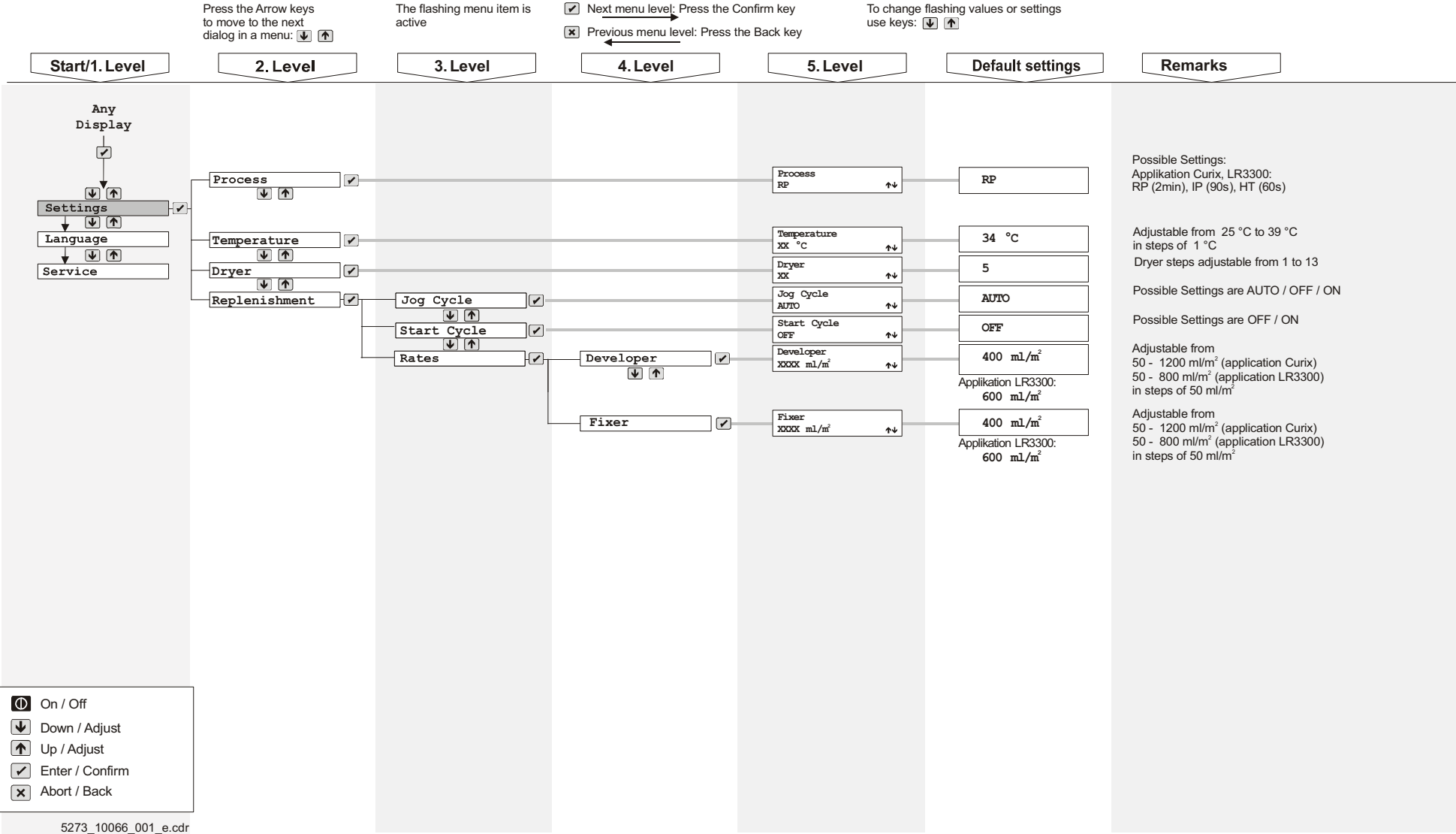
Chapter 6.6

Contents

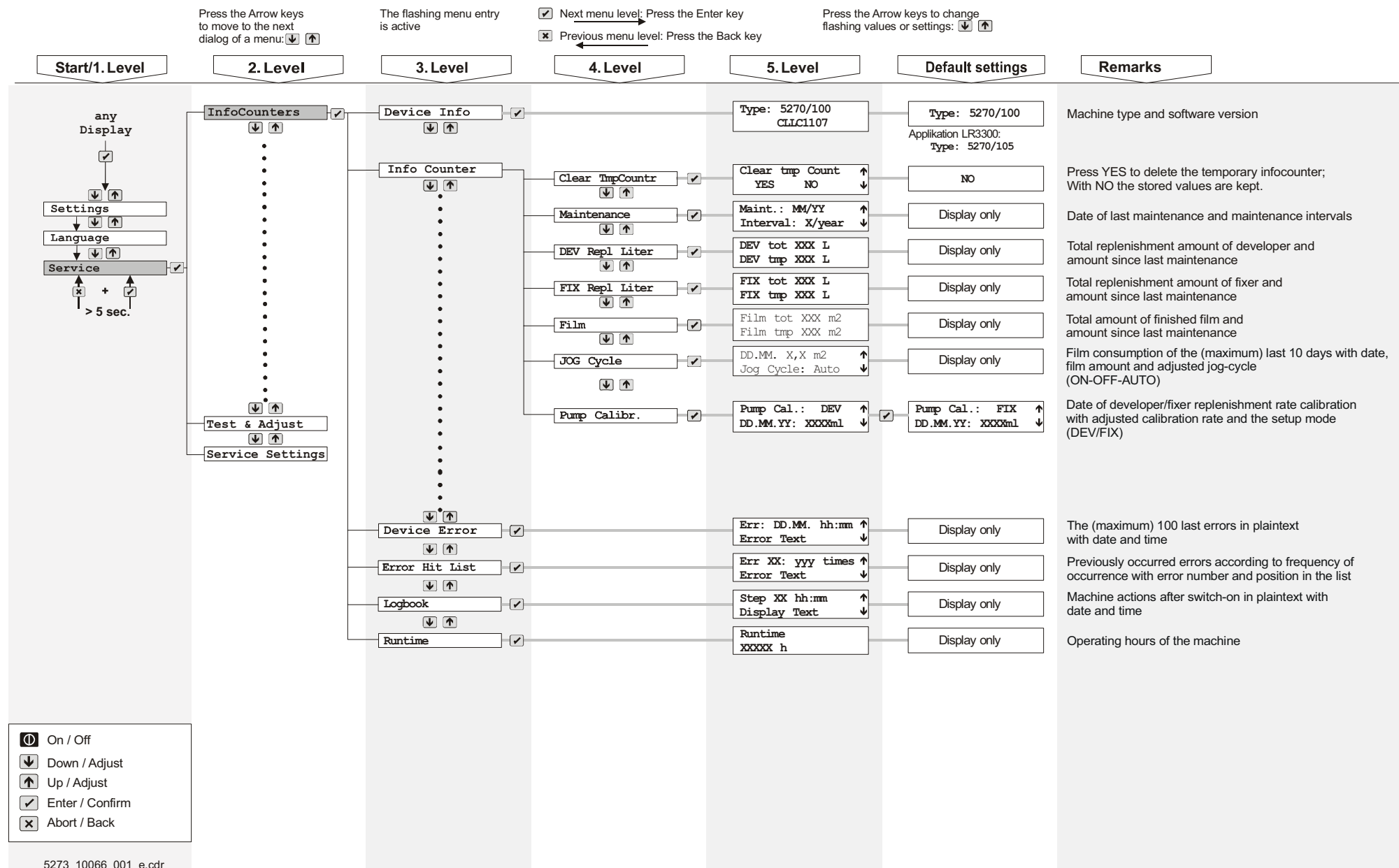
| | | |
|------------|--|-----------|
| 1 | Settings for Software Version CLLC1107 | 1 |
| 1.1 | Settings | 1 |
| 1.2 | Infocounters..... | 2 |
| 1.3 | Test & Adjust | 3 |
| 1.4 | Service Settings..... | 5 |
| 2 | Default Settings after BASEINIT | 7 |
| 2.1 | Setup options depending on applications (process mode) Curix and LR3300 | 7 |
| 2.2 | Exception: | 15 |

1 Settings for Software Version CLLC1107

1.1 Settings

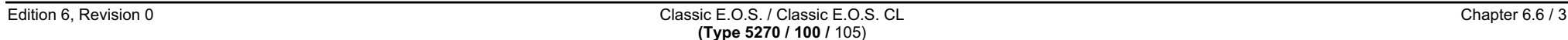


1.2 Infocounters

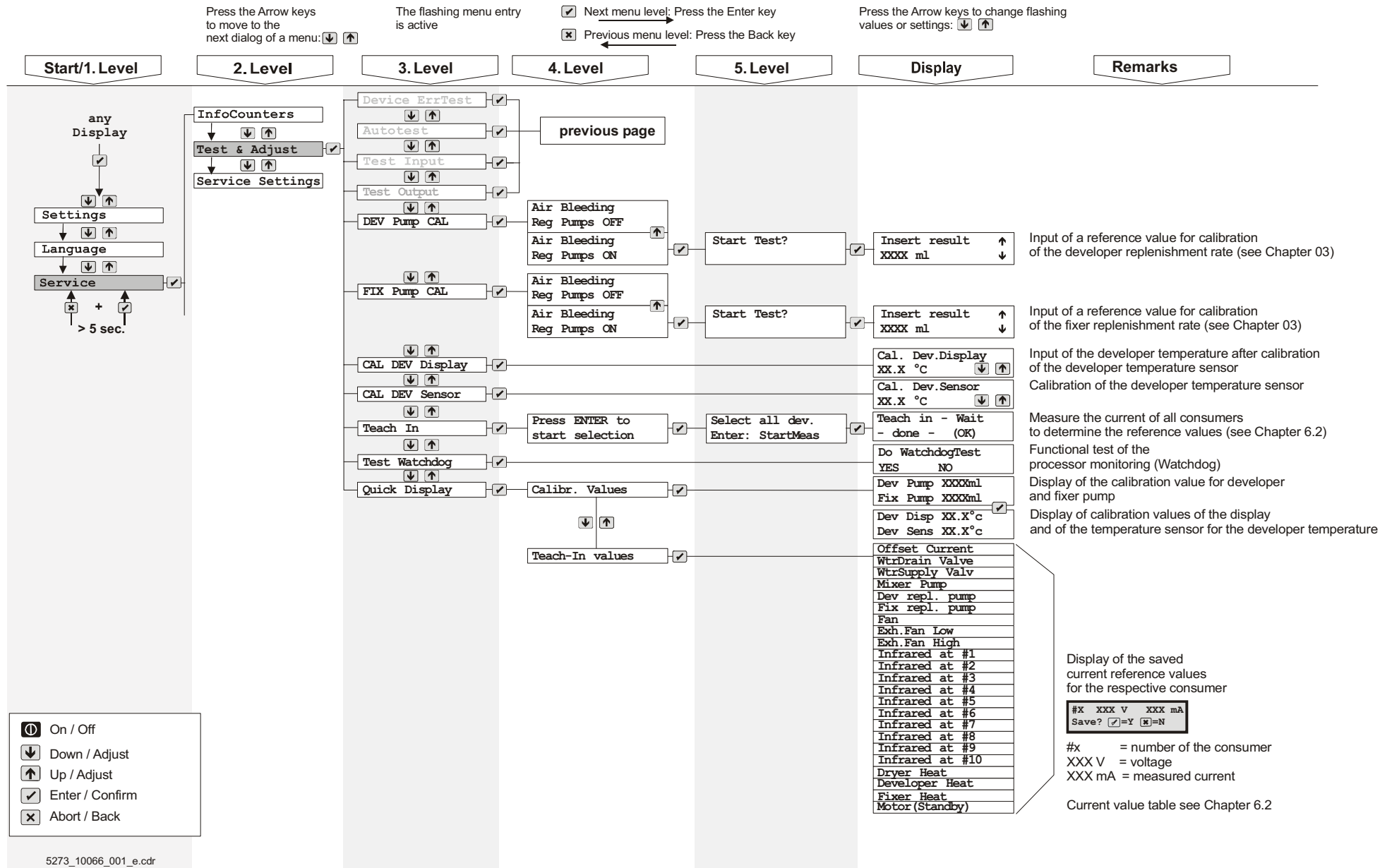


Test & Adjust

Menu Overview 1



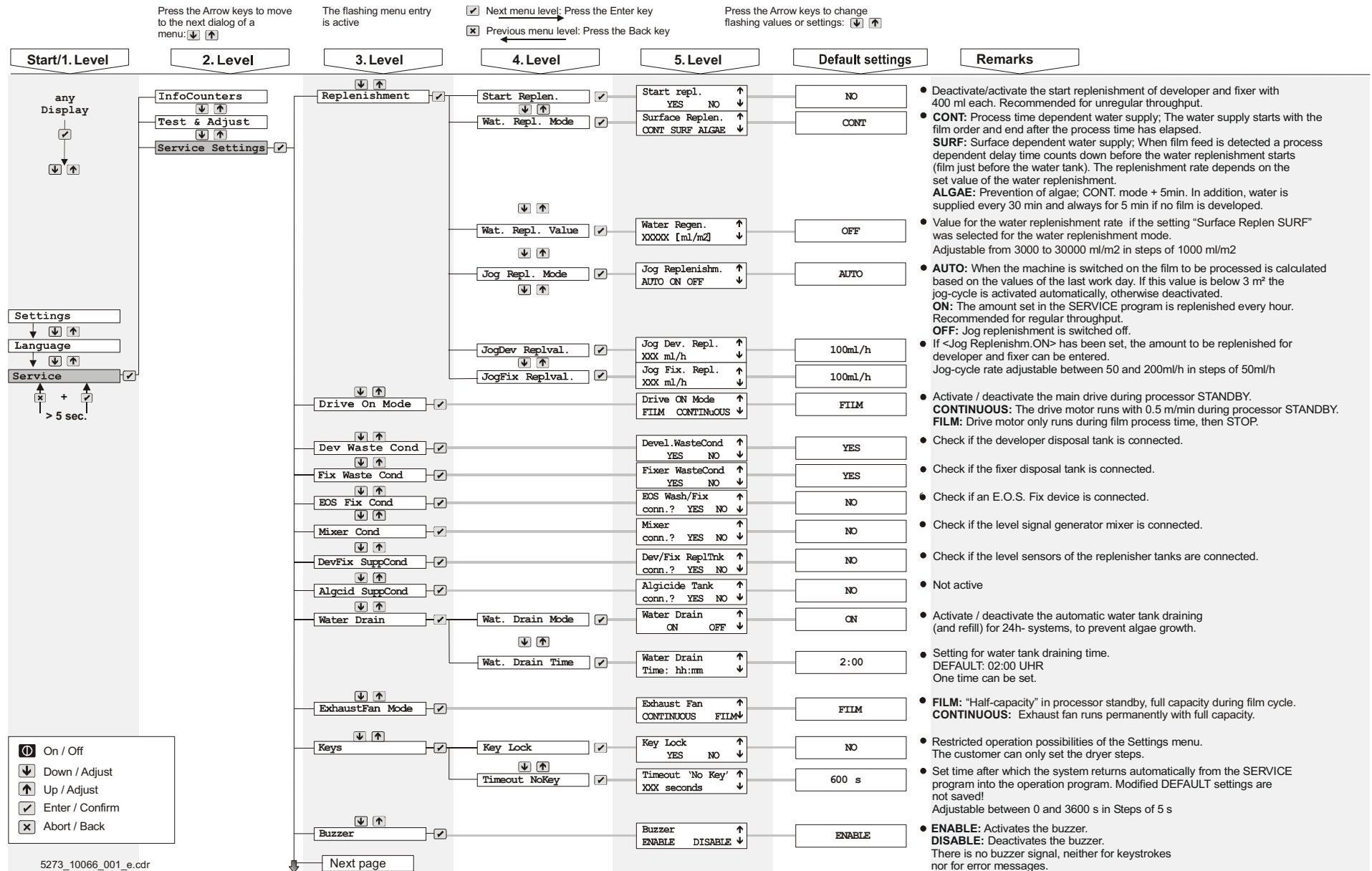
Test & Adjust Menu Overview 2



1.4

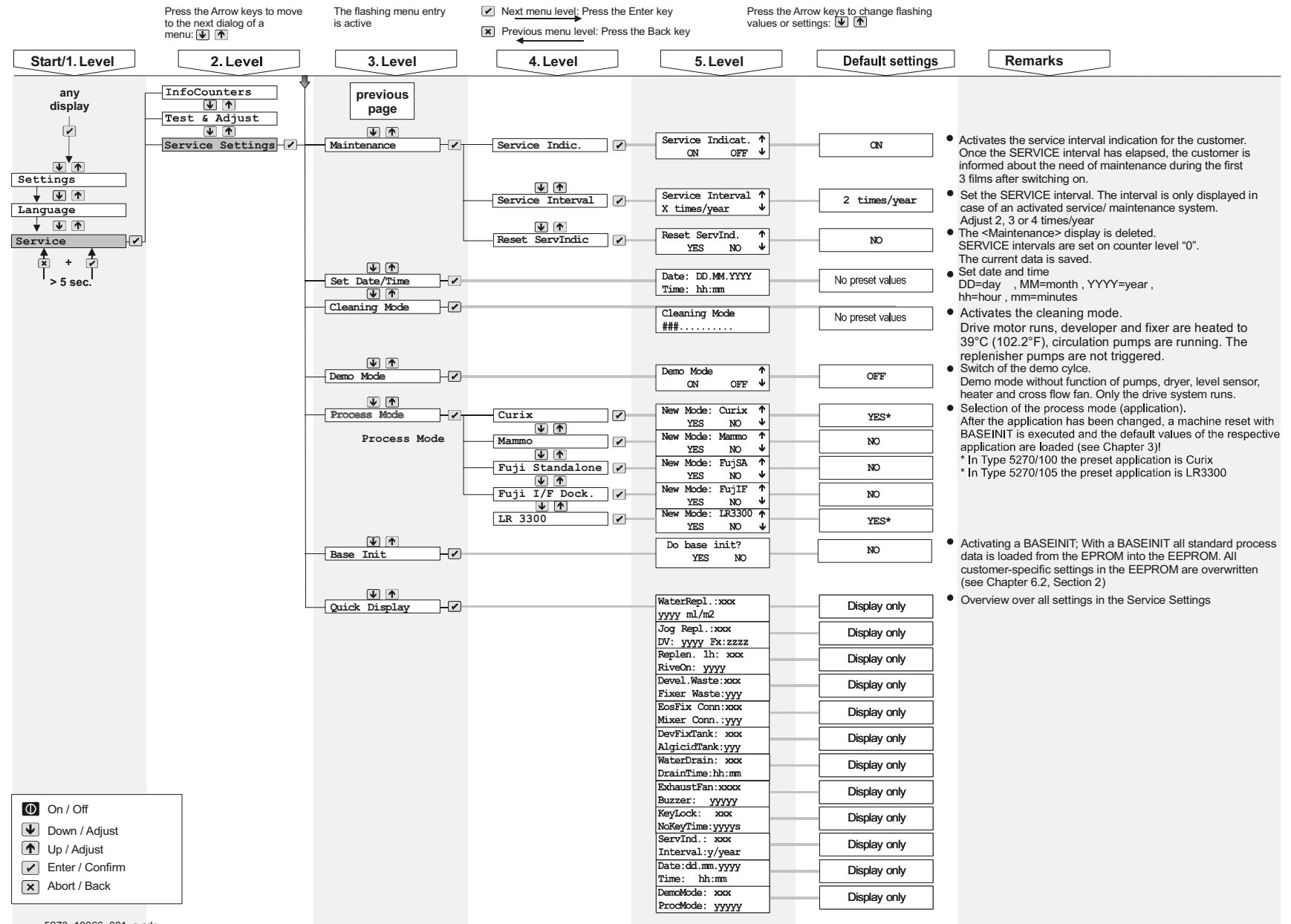
Service Settings

Menu Overview 1



Service Settings

Menu Overview 2



2 Default Settings after BASEINIT

2.1 Setup options depending on applications (process mode) Curix and LR3300

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|---|--|-------------------|
| 1 Process settings (Menu Settings→ Process) | Process RP | Process RP RP (2min) IP (90s) HT (60s) | |
| 2a Developer replenishment rate (Menu Settings→ Replenishment→ Rates→ Developer) | Developer 400 ml/m ² for Curix Developer 600 ml/m ² for LR3300 | Developer 400 ml/m ² Adjustable between 50 and 1200ml/m ² (Curix) and 50 and 800ml/ m ² (LR3300) in steps of 50ml/m ² | Application based |
| 2b Fixer replenishment rate (Menu Settings→ Replenishment→ Rates→ Fixer) | Fixer 400 ml/m ² for Curix Fixer 600 ml/m ² for LR3300 | Fixer 400 ml/m ² Adjustable between 50 and 1200ml/m ² (Curix) and 50 and 800ml/ m ² (LR3300) in steps of 50ml/m ² | Application based |
| 3 Developer temperature (Menu Settings→ Temperature) | Temperature 34 °C RP (2min): 34 °C IP (90s): 36°C HT (60s): 38°C | Temperature 34 °C 25°C – 38°C | Process based |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|--|--|---|
| 4 Dryer settings (Menu Settings→ Dryer | Dryer 5 RP (2min): 5 IP (90s): 5 HT (60s): 7 | Dryer 5 1 - 13 dryer steps can be selected | Process based |
| 5a Start replenishment (Menu Service settings→ Replenishment→ Start Replen.) | Start repl. NO | Start repl. NO ↓ ↑ Start repl. YES | Deactivate the start replenishment of developer and fixer with 400 ml each Activate the start replenishment. |
| 5b Water replenishment (Menu Service settings → Replenishment → Wat. Repl. Mode) | Surface Replen. CONT | Surface Replen. CONT ↓ ↑ Surface Replen. SURF ↓ ↑ Surface Replen. ALGAE | Process time dependent water supply: The water supply starts with the film order and ends after the process time has elapsed. Surface dependent water supply: When film feed is detected a process dependent delay time counts down before the water replenishment starts (film just before the water tank). The replenishment rate depends on the adjusted value for the water replenishment (see 5c). Prevention of algae: Mode CONT. + 5min. In addition, water is supplied every 30 min and always for 5 min if no film is developed. |





| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|--|---|---|
| 5c Setting the water replenishment rate ml/m ² (Menu Service settings→ Replenishment→ Water Repl. Value) | Wat.Repl.Value 30000 ml/m ² | Wat.Repl. Value 30000 ml/m ² ↓ ↑ From 3000 - 30000 ml/m ² adjustable in steps of 1000 ml/m ² | Value for the water replenishment rate in <Water Repl. Mode>, if the setting <Surface Replen SURF> was selected. |
| 5d Jogcycle replenishment (Menu Service settings→ Replenishment→ Jog Repl. Mode) | Jog Replenishm Auto | Jog Replenishm. Auto ↓ ↑ | When the machine is switched on, the value of film in m ² processed on the previous day is evaluated. If this value is below 3 m ² the jog-cycle is activated automatically, otherwise it is deactivated. |
| | | Jog Replenishm. ON ↓ ↑ | Every hour the rate set up in the SERVICE program (see 5e) is replenished. |
| | | Jog Replenishm. OFF | Jog replenishment is switched off. |
| 5e Developer jogcycle rate (Menu Service settings→ Replenishment→ JogDev Replval.) Fixer Jogcycle rate (Menu Service settings→ Replenishment→ JogFix Replval.) | Jog Dev Repl. 100 ml/h | Jog Dev Repl. Xxx ml/h ↓ ↑ From 50-200 ml/h in steps of 50 ml/h | If <Jog Replenishm. ON> is set up, the rate to be replenished for developer and/or fixer can be entered. |
| | Jog Fix Repl. 100 ml/h | Jog Fix Repl. Xxx ml/h | |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|---|--|--|
| 6 Motor drive during processor STANDBY (Menu Service settings→ Drive on Mode) | <div>Drive ON Mode CONTINUOUS</div> | <div>Drive ON Mode CONTINUOUS</div> <div>↓ ↑</div> <div>Drive ON Mode FILM</div> | Activate / deactivate the main drive during processor STANDBY The drive motor runs with 0.5 m/min during processor STANDBY Drive motor only runs during film process time, then STOP |
| 7a Level sensor of developer disposal tank connected? (Menu Service Settings→ Dev Waste Cond) | <div>Devel.Waste cond Yes</div> | <div>Devel.Waste cond Yes</div> <div>↓ ↑</div> <div>Devel.Waste cond No</div> | Check if the developer disposal tank is connected. |
| 7b Level sensor of fixer disposal tank connected? (Menu Service Settings→ Fix Waste Cond) | <div>Fixer Waste conn? Yes</div> | <div>Fixer Waste conn? Yes</div> <div>↓ ↑</div> <div>Fixer Waste conn? No</div> | Check if the fixer disposal tank is connected. |
| 8 E.O.S. fix device connected? (Menu Service Settings→ EOS Fix Cond) | <div>EOS Wash/Fix conn.? No</div> | <div>EOS Fix conn.? No</div> <div>↓ ↑</div> <div>EOS Fix conn.? Yes</div> | Check if an E.O.S. fix device is connected. |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|--|---------------------------------------|---|--|
| 9 Level signal mixer connected? (Menu Service Settings→ Mixer Cond) | <div>Mixer conn.? No</div> | <div>Mixer conn.? No</div> <div>↓ ↑</div> <div>Mixer conn.? Yes</div> | Check if the level signal generator mixer is connected. |
| 10 Level sensor supply tanks (Menu Service Settings→ DevFix SuppCond) | <div>Dev/Fix Repl Tnk conn.? No</div> | <div>Dev/Fix Repl Tnk conn.? No</div> <div>↓ ↑</div> <div>Dev/Fix Repl Tnk conn.? Yes</div> | Check if the level sensors of the replenisher tanks are connected. |
| 11 Level sensor anti-algae tank (Menu Service Settings→ Algcid SuppCond) | <div>Algicide Tank conn.? No</div> | <div>Algicide Tank conn.? No</div> | Not active |
| 12a Automatic water tank drain due to algae (Menu Service Settings→ Water Drain→ Wat.Drain Mode) | <div>Water Drain On</div> | <div>Water Drain On</div> <div>↓ ↑</div> <div>Water Drain Off</div> | Activate / deactivate the automatic water tank draining (and refill) for 24 hour systems, to prevent algae growth. |
| 12b Setup of time for water tank draining (Menu Service Settings→ Water Drain→ Wat. Drain Time) | <div>Water Drain Time 2:00</div> | <div>Water Drain Time 2:00</div> <div>↓ ↑</div> <div>Water Drain Time hh:mm</div> | Setting for water tank draining time. <ul style="list-style-type: none"> • DEFAULT: 02:00 h • One time can be set. |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|------------------|--|------------------------------|---|
| 13 | Function of the exhaust fan in processor standby (Menu Service Settings→ExhaustFan Mode) | ExhaustFan FILM | FILM: “Half power” of the exhaust fan in processor STANDBY, full power during film cycle. |
| | | ExhaustFan CONTINUOUS | CONTINUOUS: Exhaust fan runs permanently with full capacity. |
| 14 | Control panel lock (Menu Service Settings→Keys→Key Lock) | Key Lock NO | Restricted operation possibilities of the Settings menu. The customer can only set the dryer steps. |
| | | Key Lock YES | |
| 15 | Return to the operation program Timeout (Menu Service Settings→Keys→TimeoutNoKey) | Timeout NoKey 600 seconds | Set time after which the system returns automatically from the SERVICE program into the operation program. Modified DEFAULT settings will not be saved. |
| | | Timeout NoKey xxx seconds | |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|---------------------------------|--|--|
| 16 Buzzer (Menu Service Settings → Buzzer) | Buzzer ENABLE | Buzzer ENABLE | Activates the buzzer. |
| | | <div> <div>↓</div> <div>↑</div> </div> Buzzer DISABLE | Deactivates the buzzer. Keystrokes or error messages will not come with an acoustic signal. |
| 17a Switch on service / maintenance indicator (Menu Service Settings → Maintenance → Service Indic.) | ServiceIndicat. ON | ServiceIndicat. ON | Activates the service interval indication for the customer. Once the SERVICE interval has elapsed, the customer is informed about the need of maintenance during the first 3 films after switching on. |
| | | <div> <div>↓</div> <div>↑</div> </div> ServiceIndicat. OFF | Deactivate. |
| 17b Set the SERVICE intervals per year (Menu Service Settings → Maintenance → Service Interv.) | ServiceInterval 2 times/year | ServiceInterval 2 times/year | Set the SERVICE interval. The interval is only displayed in case of an activated service system. |
| | | <div> <div>↓</div> <div>↑</div> </div> ServiceInterval x times/year Adjust 2, 3, or 4 times/year | |

| SERVICE SETTINGS | DEFAULT settings | Possible settings | Meaning |
|---|-----------------------|---|---|
| 18 Simulation (demo) of film processor (Menu Service Settings→Demo Mode) | Demo Mode OFF | Demo Mode OFF | Switch off demo mode. |
| | | <div>   </div> Demo Mode ON | Demo mode without function of pumps, dryer, level sensors, heater and cross-flow fan. Only the drive system runs. |
| 19 Machine type and software information (Menu Info Counters→Device Info) | Type: 5270/100 xxx | Type: 5270/100 CLLC1107 | Adjust machine type and software. |
| | | <div>   </div> Type: 5270/105 CLLC1107 | |

2.2

Exception:

The following values will only be overwritten if they caused a plausibility violation in the EEPROM (see Chapter 3):

| Menu | Default settings | Possible settings | Meaning |
|--|----------------------------------|--|---|
| 1 Calibration of developer / fixer replenishment rate (Menu Test&Adjust? DEV/FIX Pump CAL) | Cal Dev Pump goto Test/Adjust | Insert result 75ml (for example) Adjustable in steps of 5 ml | The replenishment rate developer / fixer is not preset and must be calibrated (see Chapter 3) |
| 2 Language setting (Menu Language) | ENGLISH | ENGLISH (for example) | Language setting for the User menu, available options: English, Portuguese, German, Danish, Dutch, Norwegian, French, Finnish, Spanish, Swedish, Italian, Greek |
| 3 Process mode (Menu Service Settings? Process Mode) | Curix | New Mode:Curix Yes No The applications CURIX, MAMMO, FUJI-STANDALONE, FUJI- I/F DOCKING and LR3300 can be selected | Selection of an application. After the application has been changed the machine is reset automatically with a BASEINIT. |
| 4 Calibration of the developer temperature sensor (Menu Test & adjust ? CAL DEV Sensor) | CAL.DEV.Sensor 0.0 °C | CAL.DEV.Sensor +0.5 °C (for example) | By means of this function the developer temperature offset can be corrected by +/-1°C in steps of 0.1°C. |

Chapter 6.7

Contents

| | | |
|----------|--|----------|
| 1 | Determining the Order Numbers of Control Board and Software | 1 |
| 2 | Introduction of Processor Software CLLC_1203 | 3 |
| 3 | Introduction of Processor Software CLLC_1301 | 3 |


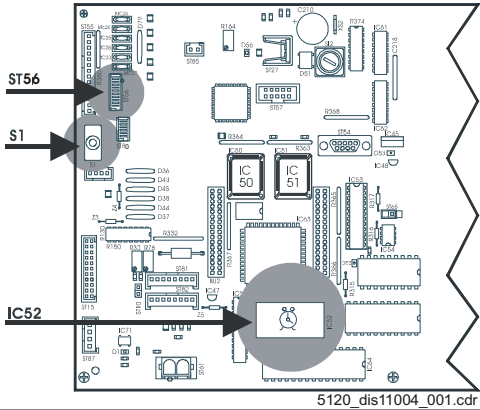

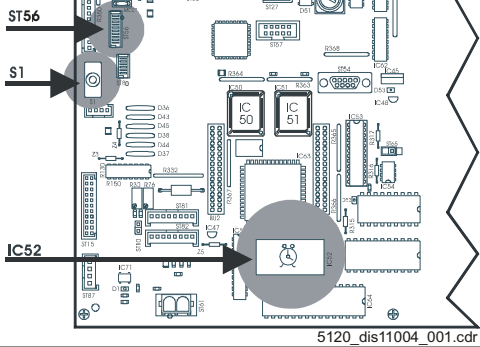

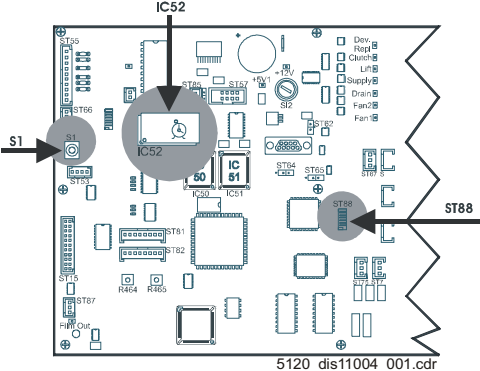
Printed copies of this document are not controlled.

The reader should always refer to MedNet to ensure that they are working with the latest copy of the document.

Printed copies of this document are not controlled.

The reader should always refer to MedNet to ensure that they are working with the latest copy of the document.

1 Determining the Order Numbers of Control Board and Software

| Types | Serial No. | Characteristics | | Spare Parts Name | Order Number |
|----------------------------------|---------------------------------|---|---|---|--|
| | | Control Panel | Control Board | | |
| 5270/100 | < 2200 | 3 Keys  | GS1  | Processor Software EOSU1102 or successor | CM+9.5270.9350.4 |
| 5270/100 5270/105 5272/100 | 2200 – 4499 < 1138 < 1500 | 4 Keys  |  | Control Board Compact / Solo E.O.S. Contains processor control board GS1 and compatible software for film handling and processor modules. | CM+9.5270.7960.1 |
| 5270/100 5270/105 5272/100 | ≥ 4500 ≥ 1138 ≥ 1500 | 4 Keys  | PCB1  | Processor Software CLLC1301 or successor Shielding Box + Control Board CL/LC + PLD Contains processor software. Sensing of level in second fixer bath is supported. If required, build in level sensor (CM+9.5270.9160.0) and connect to control board, plug ST76 | CM+9.5270.9410.3 CM+9.5270.9450.2 |

Distinctive features:

- S1: Reset switch – modified layout
- IC52: Clock chip – modified position
- ST56 = ST88: plug-in connection – modified position and name

Order Numbers in
April, 2005
Order these or
current successors.

Printed copies of this document are not controlled.

The reader should always refer to MedNet to ensure that they are working with the latest copy of the document.

Printed copies of this document are not controlled.

The reader should always refer to MedNet to ensure that they are working with the latest copy of the document.

2 Introduction of Processor Software CLLC_1203

Description:

The introduction of Processor Software CLLC_1203 solves dryer problems.

3 Introduction of Processor Software CLLC_1301

Description:

The introduction of Processor Software CLLC_1301 solves problems in interfacing the processor with Siemens Thoramat.

Section 7

contains:

- An alphanumeric reference list
- Reference diagrams for the identification and location of assemblies in the machine
- Block diagrams

Chapter 7

Contents

| | | |
|------------|---|-----------|
| 1 | Abbreviations and Short Terms | 1 |
| 2 | Control Board PCB1..... | 2 |
| 2.1 | Control Board PCB1 (fuses, potentiometers, switches) | 2 |
| 2.2 | Control Board PCB1 (LED, IC, XK1) | 4 |
| 2.3 | Control Board PCB1 (plugs, sockets)..... | 6 |
| 3 | Reference Diagrams..... | 8 |
| 3.1 | Machine front view | 8 |
| 3.2 | Machine side view, right | 8 |
| 3.3 | Machine side view, left..... | 9 |
| 3.4 | Machine top view..... | 10 |
| 3.5 | Dryer | 11 |
| 3.6 | Current Sensor Board PCB2..... | 12 |

Appendix:

- A Complete Diagram**
- B Overview Control Board PCB1**

1

Abbreviations and Short Terms

| Code | Designation |
|-----------|---|
| PCB1 | Control Board |
| 0BE1 | Thermal cutout developer heater |
| 0BE2 | Thermal cutout fixer 2 heater |
| 0FI | GFI switch |
| 0HEAT1 | Dryer convection heater |
| 0HEAT2 | Heater fixer 2 |
| 0HEAT3 | Heater developer |
| 0IR1 | Dryer infrared heater |
| 0M1 | Dryer fan 1 |
| 0M2 | Drive motor |
| 0M4 | Synchro-motor water circulation pump (option) |
| 0M5 | Synchro-motor fixer 2 circulation pump |
| 0M6 | Synchro-motor fixer 1 circulation pump |
| 0M7 | Synchro-motor developer circulation pump |
| 0MC1 | Interference suppression filter |
| 0SW1 | Mains switch |
| 0SW2 | Safety switch (dryer flap) |
| 0SW3 | Safety switch (cover) |
| 0Si_HEAT1 | Thermal cutout dryer convection heater |
| 0Si_IR1 | Thermal cutout dryer infrared heater |
| 0TR1 | Transformer |
| 0XK1 | Terminal strip |

| Code | Designation |
|-----------|--|
| 1HEAT1 | Dryer convection heater |
| 1IR1 | Dryer infrared heater |
| 1M1 | Dryer fan 2 |
| 1M2 | Exhaust fan |
| 1Si_HEAT1 | Thermal cutout dryer convection heater |
| 2M1 | Developer replenisher pump |
| 2M2 | Fixer replenisher pump |
| 2MG1 | Water supply solenoid valve |
| 2MG2 | Solenoid valve water drain |
| 3S1 - 3S5 | Film detection scanning rollers |

0 / no prefix = main frame

1 = dryer flap

2 = base

3 = darkroom feed table

| Code | Designation |
|-------|------------------------------|
| LEV_1 | Level sensor developer |
| LEV_2 | Level sensor fixer 1 |
| LEV_3 | Level sensor fixer 2 |
| LEV_4 | Level sensor water |
| SENS1 | Developer temperature sensor |
| SENS2 | Fixer 2 temperature sensor |
| SENS3 | Dryer temperature sensor |

2 Control Board PCB1

2.1 Control Board PCB1 (fuses, potentiometers, switches)

| Fuse | Value | Description |
|------|-------------|--|
| SI1 | 1.0 A slow | Dryer fan 0M1 / 1M1 Replenisher pumps dev 2M1 / fix 2M2 |
| SI2 | 1.25 A slow | +12V V2 DC |
| SI3 | 10 A slow | Dryer convection heater 0HEAT1 / 1HEAT1 |
| SI5 | 6.25 A slow | Dryer infrared heater 0IR1 / 1IR1 |
| SI6 | 6.25 A slow | Developer heater 0HEAT3 |
| SI7 | 6.25 A slow | Fixer 2 heater 0HEAT2 |
| SI8 | 6.25 A slow | +24V DC |
| SI9 | 6.25 A slow | +24V1 / +24V2 / +42V DC |
| SI10 | 10 A slow | 230 VAC mains supply primary side |
| SI11 | 10 A slow | 208 VAC mains supply primary side |
| SI12 | 10 A slow | 200 VAC mains supply primary side |

| Pot | Description |
|------|--------------------|
| R464 | Display brightness |
| R465 | Display contrast |
| R466 | Buzzer volume |

| Switches | Description |
|----------|-------------|
| S1 | Reset |

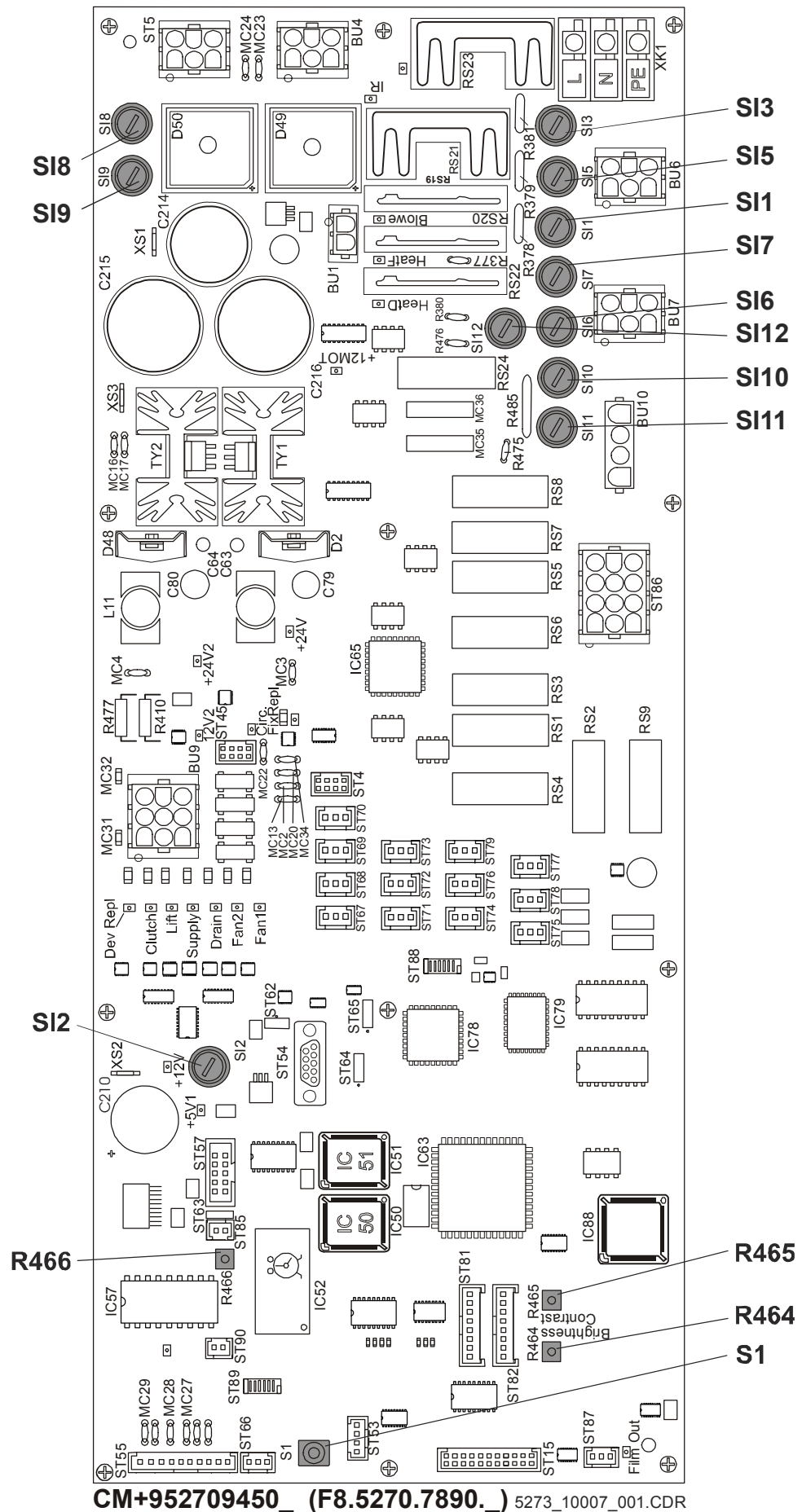


Figure 1

2.2

Control Board PCB1 (LED, IC, XK1)

| LED | | Description |
|------|---------|---|
| D21 | +24V | +24V DC supply Circulation pumps Replenisher pumps 2M3/2M4 (only for Type 5270/105) |
| D23 | +24V2 | +24V DC supply Solenoid valves water supply / drain Exhaust fan |
| D53 | +5V | +5V DC supply display and control panel |
| D54 | +12MOT | Main drive speed monitoring |
| D55 | Circ | TS30 circulation pumps 0M4 (W)(option) / 0M5 (F2) / 0M6 (F1) / 0M7 (E) |
| D56 | +12V | +12V DC supply |
| D57 | DevRepl | TS31 developer replenisher pump 2M1 |
| D58 | Clutch | n/a |
| D59 | Lift | n/a |
| D60 | Supply | TS35 water supply solenoid valve 2MG1 |
| D61 | Drain | TS36 solenoid valve water drain 2MG2 |
| D62 | Fan2 | TS37 exhaust fan 1M2 full power |
| D63 | Fan1 | TS38 exhaust fan 1M2 half power |
| D64 | HeatF | RS20 fixer 2 heater 0HEAT2 |
| D65 | Blowe | RS19 dryer fans 0M1 / 1M1 |
| D66 | IR | RS21 dryer infrared heater 0IR1 / 1IR1 |
| D67 | HeatD | RS developer heater 0HEAT3 |
| D70 | | RS23 dryer convection heater 0HEAT1 / 1HEAT1 |
| D167 | +12V2 | +12V2 DC supply |
| D172 | FixRepl | TS33 fixer replenisher pump 2M2 |
| D174 | FilmOut | Film transport sensor (only for Type 5270/105) |

| IC | Description |
|------|----------------------------|
| IC50 | Eprom for machine software |
| IC51 | Eprom for machine software |
| IC52 | Clock chip |
| IC88 | GAL |
| IC79 | EEprom |

| Power Strip | Description |
|-------------|----------------|
| XK1 | Terminal strip |

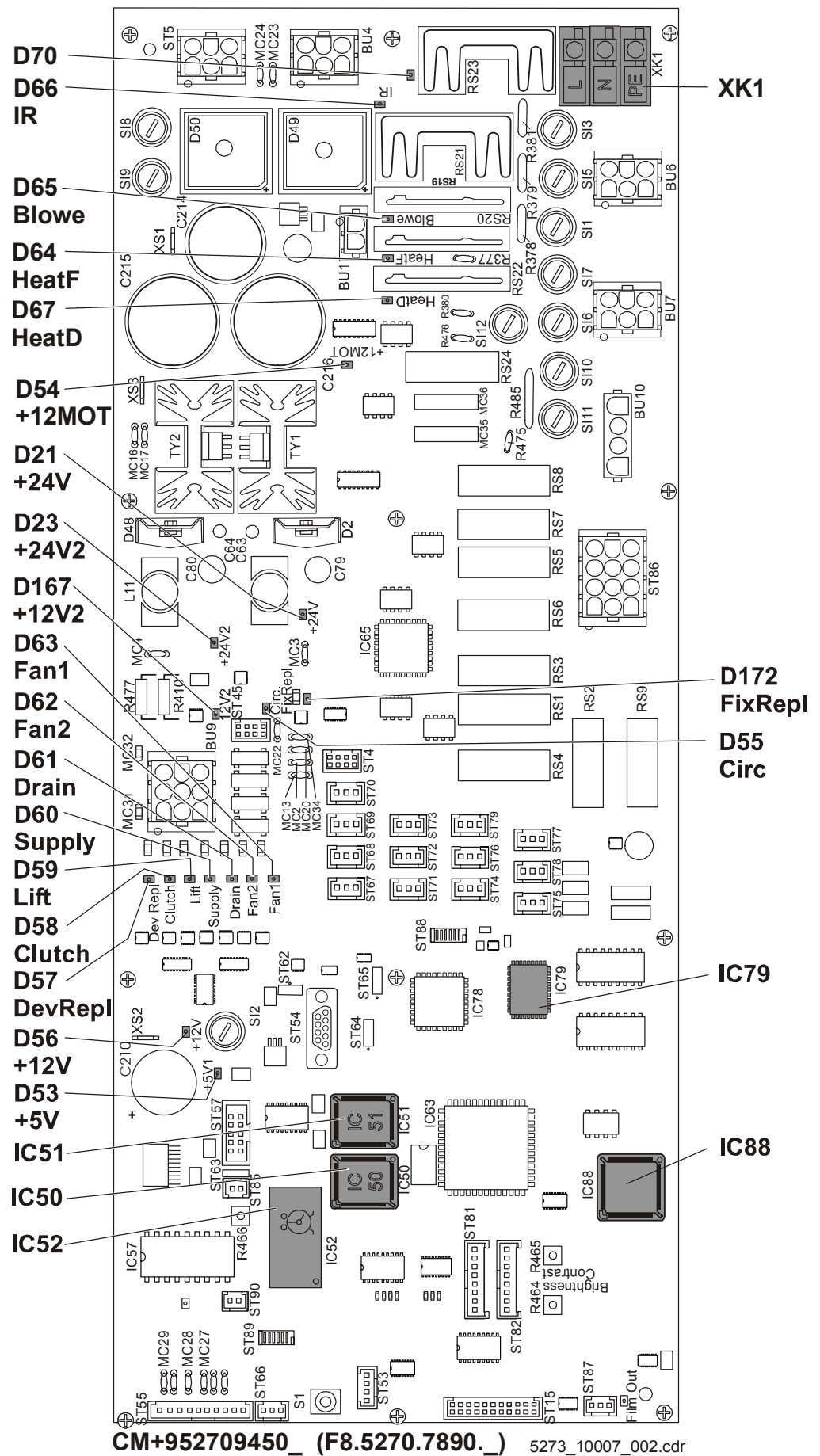


Figure 2

2.3

Control Board PCB1 (plugs, sockets)

| Plug | Description |
|------|---|
| ST4 | Replenisher pumps 2M3 / 2M4 (only for Type 5270/105) |
| ST5 | Transformer 0TR1 (15 / 21 / 30 VAC) |
| ST15 | LCD display |
| ST45 | Circulation pumps 0M4 (W)(option)/0M5 (F2)/0M6 (F1)/0M7 (D) |
| ST53 | Current Sensor Board PCB2 |
| ST54 | BOOT / OMT |
| ST55 | Scanning rollers film detection 3S1 / 3S2 / 3S3 / 3S4 / 3S5 |
| ST66 | Mixer level |
| ST67 | Developer level LEV_1 |
| ST68 | Fixer level 1 LEV_2 |
| ST69 | Water level LEV_4 |
| ST71 | Developer supply level |
| ST72 | Fixer supply level |
| ST73 | Developer disposal level |
| ST74 | Fixer disposal level |
| ST75 | Developer temperature SENS1 |
| ST76 | Fixer 2 level LEV_3 |
| ST77 | Dryer temperature SENS3 |
| ST78 | Fixer 2 temperature SENS2 |
| ST79 | Anti-algae supply level |
| ST81 | RS232 interface RK 188pro (only for Type 5270/105) |
| ST85 | Buzzer |
| ST86 | Transformer |
| ST87 | Film transport sensor (only for Type 5270/105) |
| ST90 | E.O.S. Wash / Fix (silver recovery unit) |

ST57, ST62, ST63, ST64, ST65, ST70, ST82, ST88, ST89 open

| Socket | Description |
|--------|---|
| BU1 | n/a |
| BU4 | +24V DC drive motor 0M2 |
| BU6 | Dryer infrared heater 0IR1 / 1IR1 Dryer convection heater 0HEAT1 / 1HEAT1 / 0M1 / 1M1 Dryer fan 0M1 / 1M1 |
| BU7 | Dryer convection heater 0HEAT1 / 1HEAT1 Developer heater 0HEAT3 Fixer 2 heater 0HEAT2 |
| BU9 | Exhaust fan 1M2, water supply solenoid valve 2MG1, water drain solenoid valve 2MG2 |
| B10 | Replenisher pumps 2M1 / 2M2 (only for Type 5270/100) |

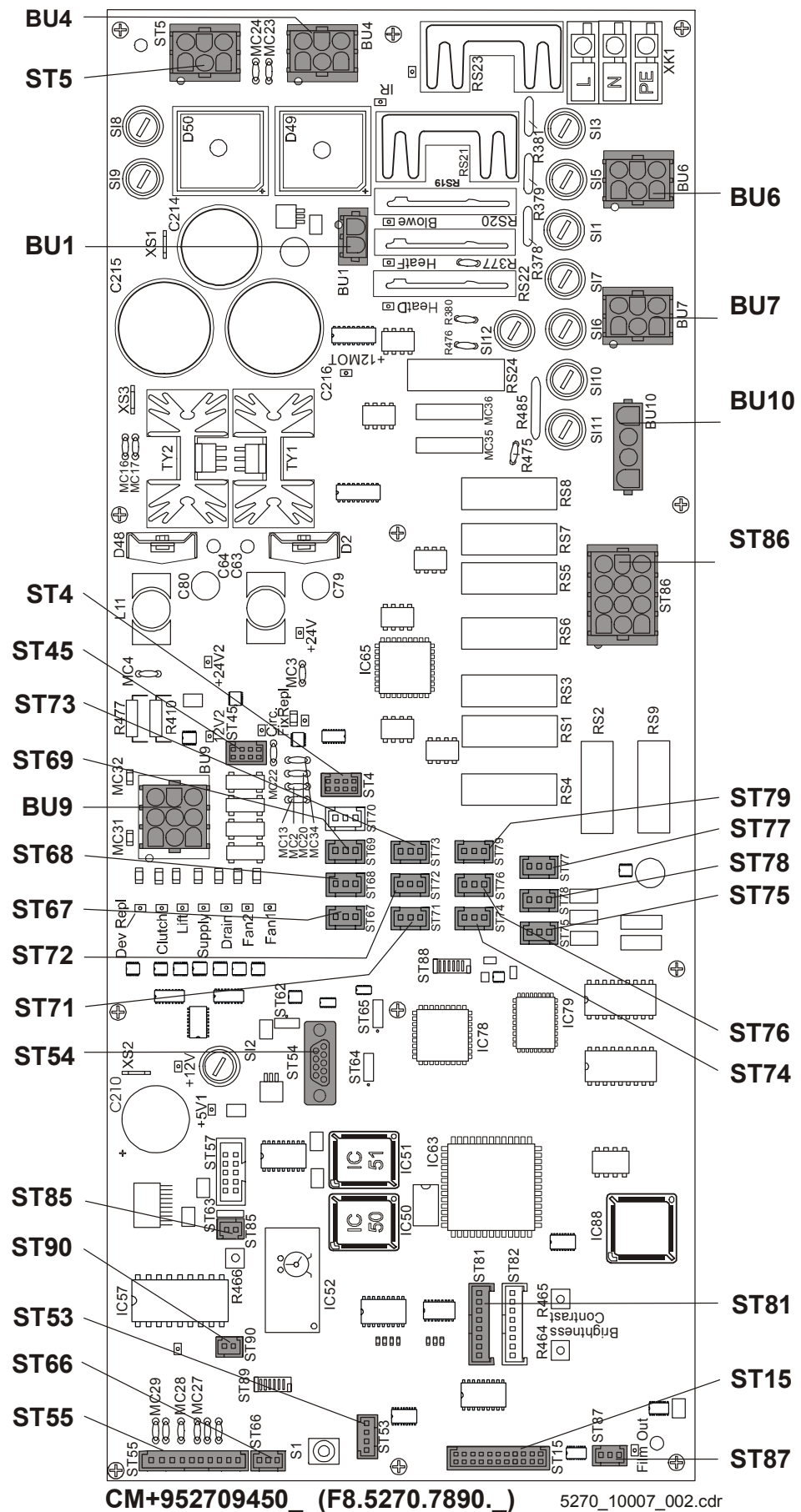


Figure 3

3 Reference Diagrams

3.1 Machine front view

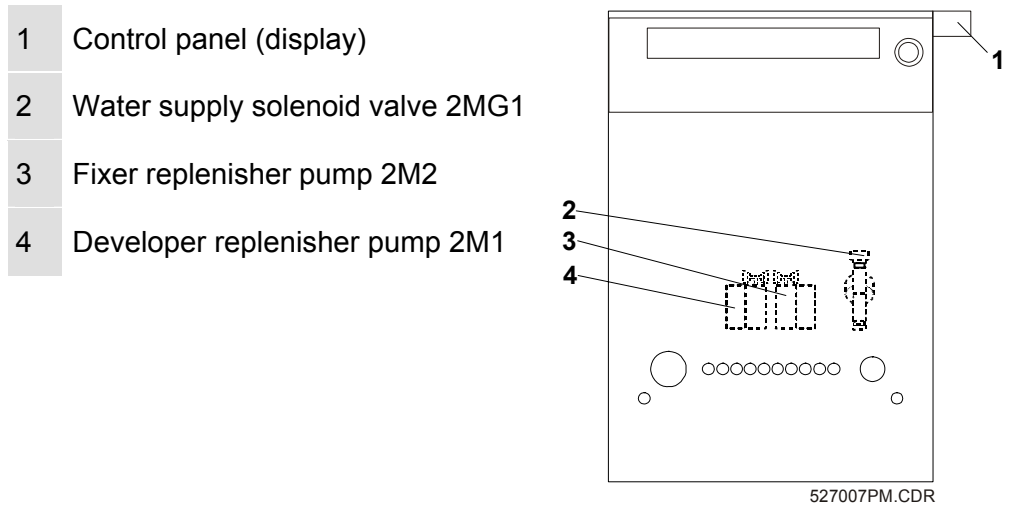


Figure 4

3.2 Machine side view, right

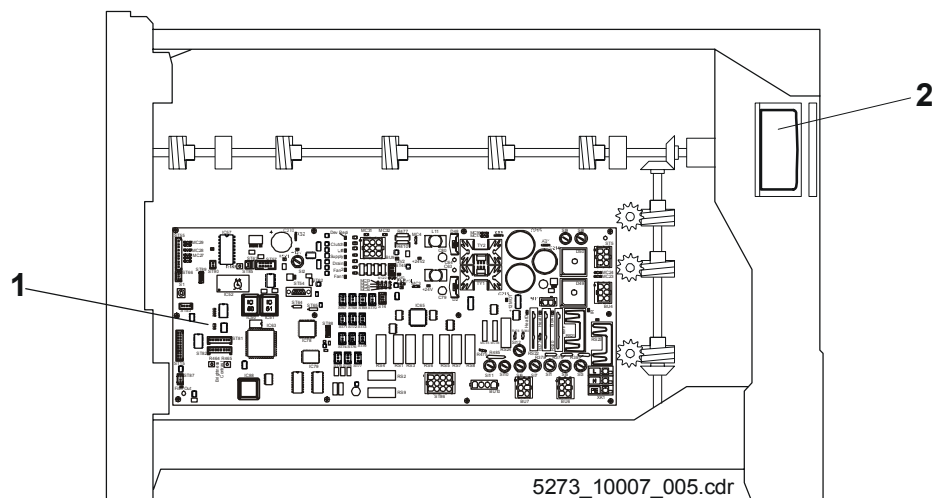
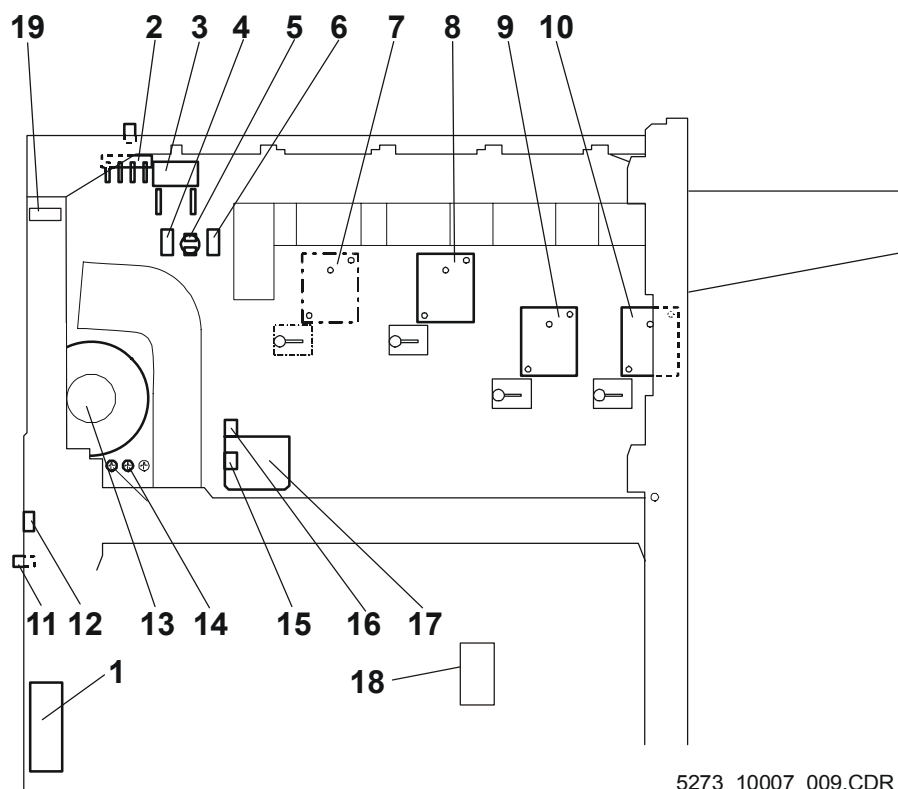


Figure 5

| | | |
|---|------|---------------|
| 1 | PCB1 | Control Board |
| 2 | OM2 | Drive motor |

3.3

Machine side view, left



5273_10007_009.CDR

Figure 6

| | | | | | |
|----|---------|--------------------------------------|----|-----------|--|
| 1 | OMC1 | Interference suppression filter | 11 | OFI | GFI switch |
| 2 | 0XK1 | Terminal strip | 12 | OSW1 | Mains switch |
| 3 | 0BE1 | Thermal cutout developer heater | 13 | OTR1 | Transformer |
| | 0BE2 | Thermal cutout fixer 2 heater | | | |
| 4 | 1IR1 | Dryer infrared heater | 14 | PE PE1 | Protective earth connection |
| 5 | 0Si_IR1 | Thermal cutout infrared dryer heater | 15 | 0HEAT1 | Dryer convection heater |
| 6 | 0IR1 | Dryer infrared heater | 16 | 0Si_HEAT1 | Thermal cutout dryer convection heater |
| 7 | 0M4 | Water circulation pump (option) | 17 | 0M1 | Dryer fan 1 |
| 8 | 0M5 | Fixer 2 circulation pump | 18 | 2MG2 | Solenoid valve water drain |
| 9 | 0M6 | Fixer 1 circulation pump | 19 | PCB2 | Current Sensor Board |
| 10 | 0M7 | Developer circulation pump | | | |

3.4 Machine top view

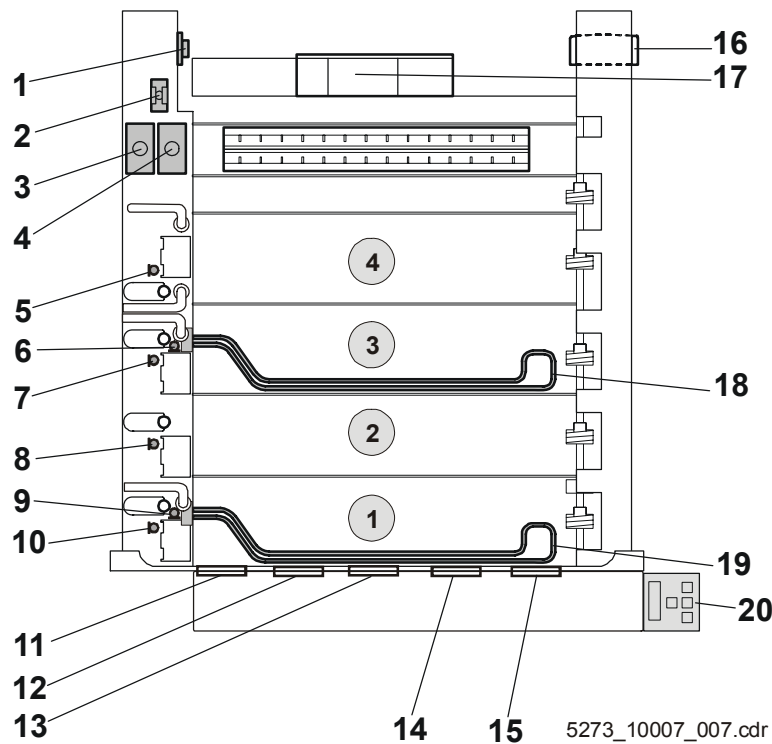


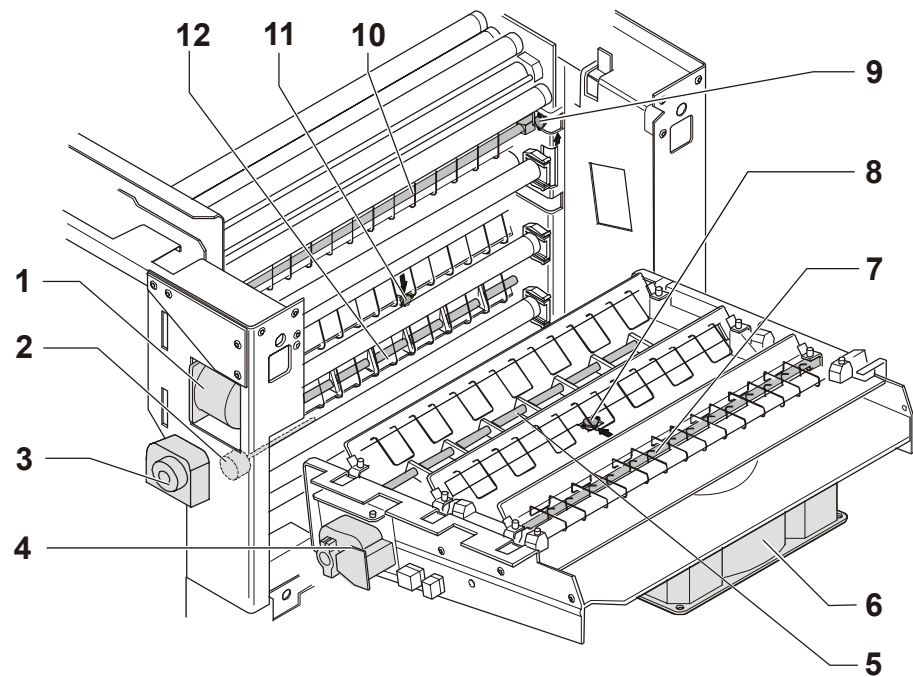
Figure 7

- ① Developer ② Fixer 1 ③ Fixer 2 ④ Water

| | | | | | |
|----|-------|-------------------------------|----|--------|-------------------------|
| 1 | OSW2 | Safety switch (dryer flap) | 11 | 3S5 | Film detection roller |
| 2 | OSW3 | Safety switch (cover) | 12 | 3S4 | Film detection roller |
| 3 | OBE2 | Thermal cutout fixer 2 heater | 13 | 3S3 | Film detection roller |
| 4 | OBE1 | Thermal cutout dev. heater | 14 | 3S2 | Film detection roller |
| 5 | LEV_4 | Level sensor water | 15 | 3S1 | Film detection roller |
| 6 | SENS2 | Fixer 2 temperature sensor | 16 | 0M2 | Drive motor |
| 7 | LEV_3 | Level sensor fixer 2 | 17 | 1M2 | Exhaust fan |
| 8 | LEV_2 | Level sensor fixer 1 | 18 | 0HEAT2 | Heater fixer 2 |
| 9 | SENS1 | Developer temperature sensor | 19 | 0HEAT3 | Heater developer |
| 10 | LEV_1 | Level sensor developer | 20 | | Control panel (display) |

3.5

Dryer



5273_10007_008.cdr

Figure 8

| | | |
|----|-----------|--|
| 1 | 0M2 | Drive motor |
| 2 | SENS3 | Dryer temperature sensor |
| 3 | 0M1 | Dryer fan 1 |
| 4 | 1M1 | Dryer fan 2 |
| 5 | 1HEAT1 | Dryer convection heater |
| 6 | 1M2 | Exhaust fan |
| 7 | 1IR1 | Dryer infrared heater |
| 8 | 1Si_HEAT1 | Thermal cutout dryer convection heater |
| 9 | 0Si_IR1 | Thermal cutout dryer infrared heater |
| 10 | 0IR1 | Dryer infrared heater |
| 11 | 0Si_HEAT1 | Thermal cutout dryer convection heater |
| 12 | 0HEAT1 | Dryer convection heater |

3.6 Current Sensor Board PCB2

- 1 LED D3
- 2 LED D12
- 3 Plug ST2

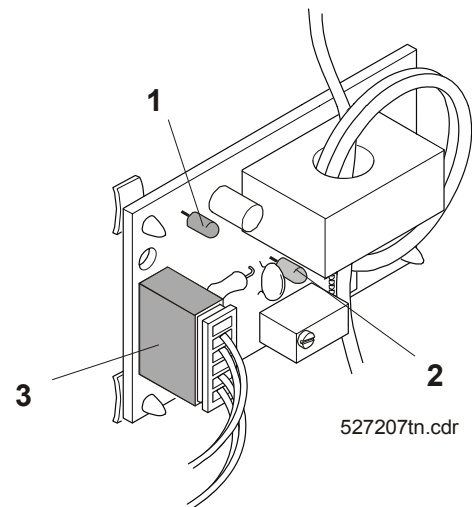


Figure 9

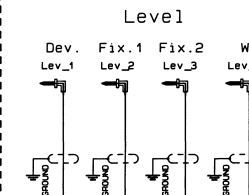
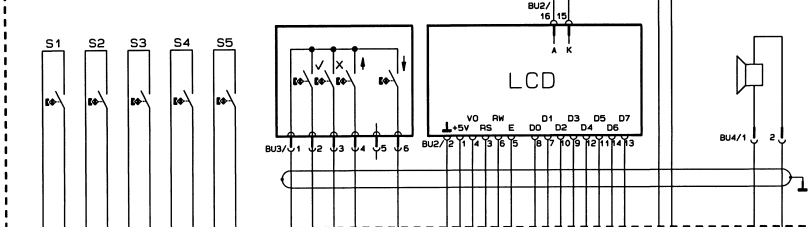
| Component | Description |
|-----------|--|
| D3 | +5 V power supply |
| D12 | -5 V power supply |
| ST2 | Power connection and signal forwarding to Control Board PCB1 |

Appendix

A Complete Diagram F1.5272.7005.0

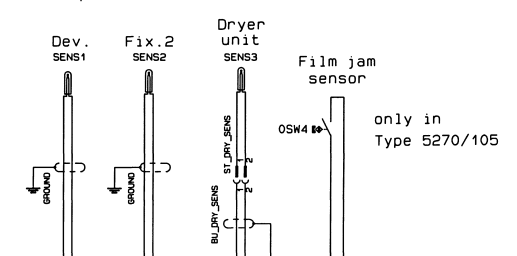
B Overview Control Board PCB1 (CM+952709450_ / F8.5270.7890._)

Feed table - 3 -



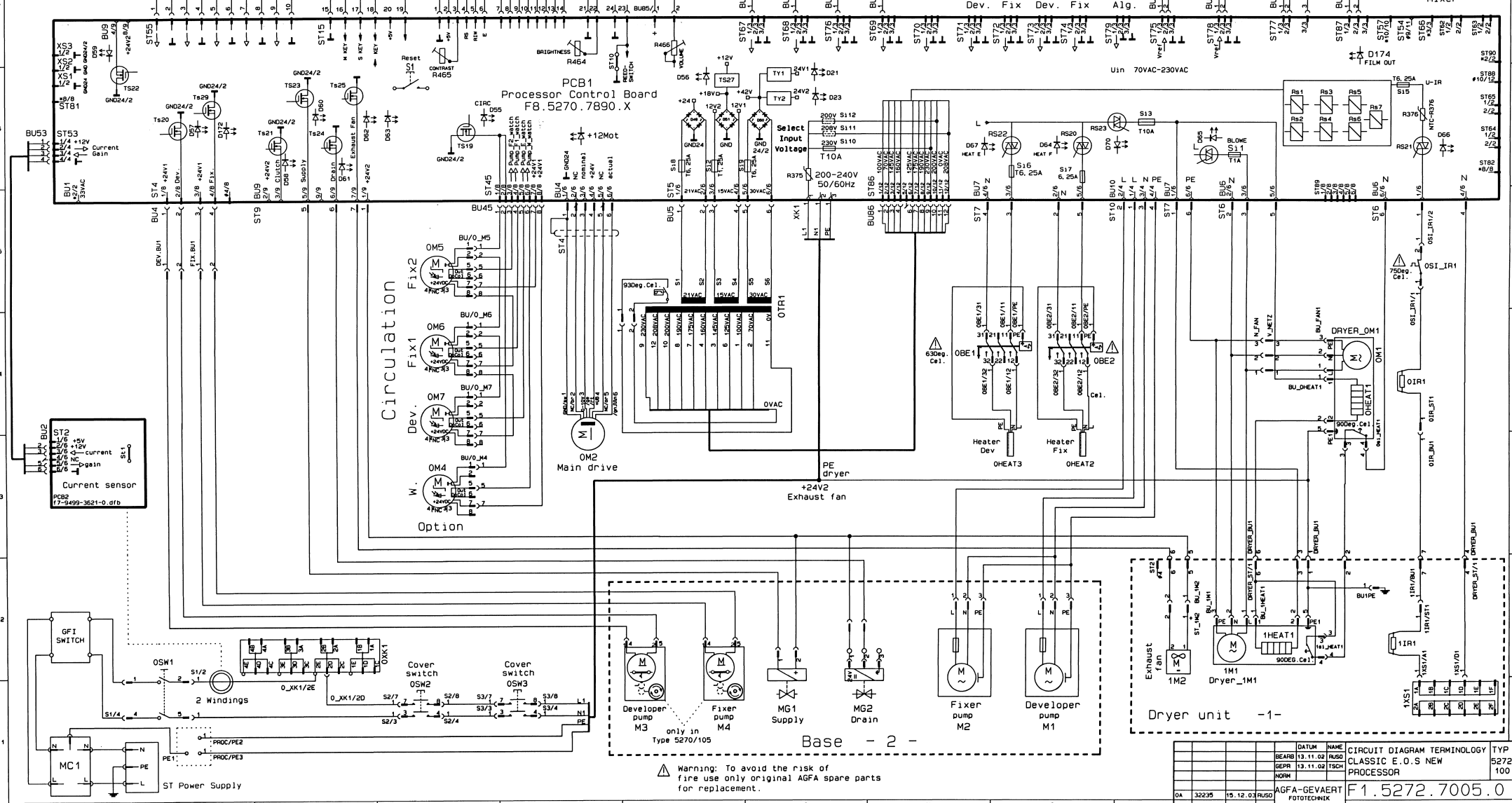
- 0 Film Processor
- 1 Dryer unit
- 2 Base
- 3 Feed Table

Temperature sensor



- Level
- Supply
- Disp.
- Dev. Fix
- Dev. Fix
- Alg.
- Supply Mixer

Processor Control Board F8.5270.7890.X



Warning: To avoid the risk of fire use only original AGFA spare parts for replacement.

Dryer unit - 1 -

| DATUM | NAME | CIRCUIT DIAGRAM TERMINOLOGY | TYP |
|----------|-------|-----------------------------|----------------|
| 13.11.02 | RUS | CLASSIC E.O.S NEW | 5272/100 |
| 13.11.02 | TSCH | PROCESSOR | |
| DA | 32235 | AGFA-GEVAERT | F1.5272.7005.0 |
| AE-2 | AE-NR | DATUM | NAME |
| | | | MUECHEN |
| | | | ERSATZ FUER |



WARNING
for continued protection against fire hazard,
replace only with the same type and rating of fuse.

| Fuse | Value | Description |
|-------|------------------|--|
| SI 1 | 1.0 A slow blow | Dryer Fan, Replenishment Pumps (only Types 5273,5272, 5270/100) +12 V2 DC |
| SI 2 | 1.25 A slow blow | Heaters Dryer Convection 0HEAT1 / 1HEAT1 |
| SI 3 | 10 A slow blow | Heaters Dryer IR-Radiator 0IR1 / 1IR1 |
| SI 5 | 6.25 A slow blow | Heaters Dryer Convection 0HEAT1 / 1HEAT1 |
| SI 6 | 6.25 A slow blow | Heater Developer 0HEAT3 |
| SI 7 | 6.25 A slow blow | Heater Fixer 0HEAT2 |
| SI 8 | 6.25 A slow blow | +24 V DC |
| SI 9 | 6.25 A slow blow | +24V1 / +24V2 / +42 V DC |
| SI 10 | 10 A slow blow | Main Connection from Power Unit: Power Supply 230 VAC |
| SI 11 | 10 A slow blow | Main Connection from Power Unit: Power Supply 208 VAC |
| SI 12 | 10 A slow blow | Main Connection from Power Unit: Power Supply 200 VAC |

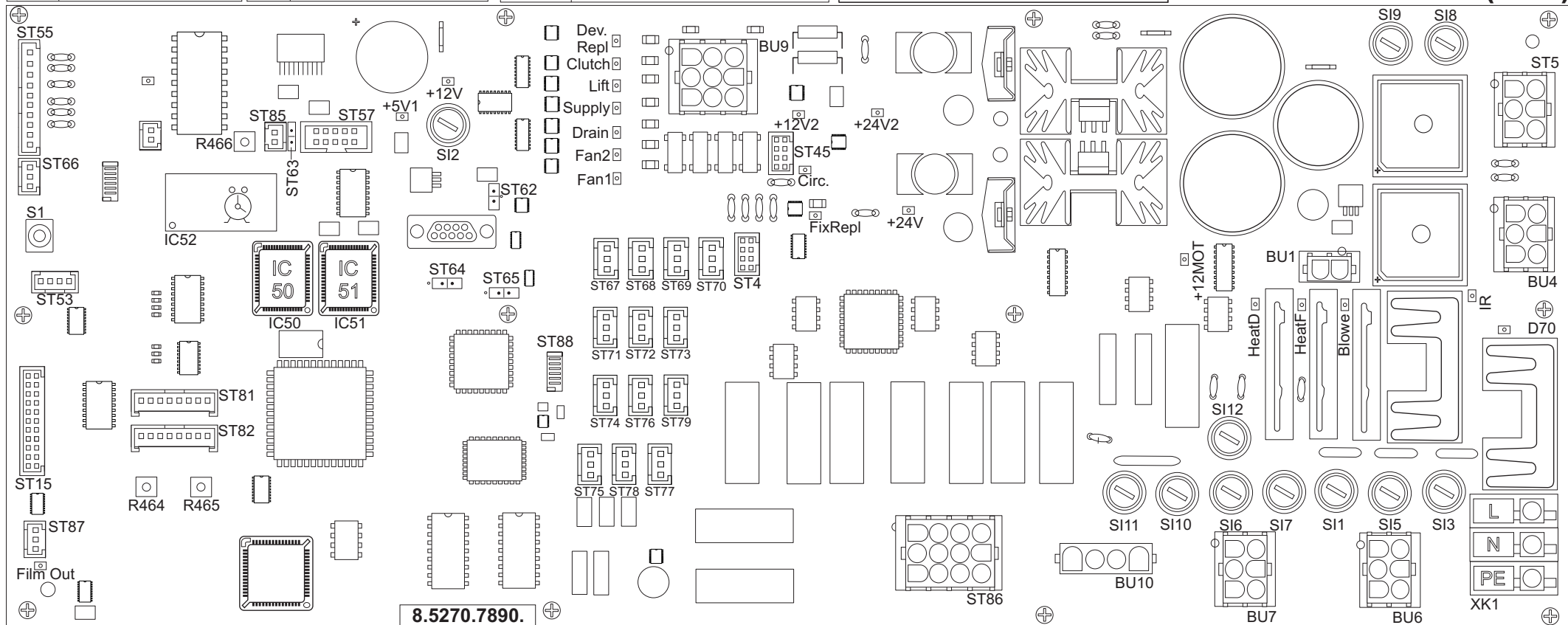
| Pot. | Description | IC | Description |
|--------|--------------------|------|---------------------|
| R464 | Display Brightness | IC50 | EPROM for Device SW |
| R465 | Display Contrast | IC51 | EPROM for Device SW |
| R466 | Buzzer Volume | IC52 | Clock Modul |
| Switch | Description | | |
| S1 | Reset | | |

| Plugs | Description |
|----------|---|
| BU1 | PCB518 Demagn. of Clutch (only Type 5120) |
| BU4/1,4 | +24 V DC Main Drive 0M2 |
| BU4/3,6 | Control Terminal of Main Drive 0M2 |
| BU6/1,4 | Heaters Dryer IR-Radiator 0IR1 / 1IR1 |
| BU6/5 | Heaters Dryer Convection 0HEAT1 / 1HEAT1 |
| BU6/2,3 | Dryer Fans 0M1 / 1M1 |
| BU7/1 | Heaters Dryer Convection 0HEAT1 / 1HEAT1 |
| BU7/3,4 | Heater Developer 0HEAT3 |
| BU7/2,5 | Heater Fixer 0HEAT2 |
| BU9/2,3 | Clutch 500MG2 |
| BU9/4,8 | Feed-Table:Cover-Release (only Type 5120) |
| BU9/1,7 | Exhaust Fan 1M2 |
| BU9/1,5 | Solenoid Valve Supply Water |
| BU9/1,6 | Solenoid Valve Drain Water |
| BU10/1,3 | Replenishment Pump Developer (only for 5273, 5272, 5270/100) |
| BU10/2,3 | Replenishment Pump Fixer (only for 5273, 5272, 5270/100) |
| XK1 | Mains (L=brown / N=blue) |
| ST4/1,2 | Replenishment Pump Developer (only Types 5270/105, 5120) |
| ST4/3,4 | Replenishment Pump Fixer (only Types 5270/105, 5120) |
| ST5 | Transformer 0TR1 (15 / 21 / 30 VAC) |
| ST15 | Feed-Table |
| ST45 | Circulation Pumps |

| Plugs | Description |
|---|---|
| ST53 | Current Sensor PCB2 |
| ST55 | Scanner Rollers |
| ST66 | Level Mixer (only Types 5270, 5272, 5273) |
| ST67 | Level Developer LEV_1 |
| ST68 | Level Fixer 1 LEV_2 |
| ST69 | Level Water LEV_4 |
| ST70 | Level bottom tray (only Type 5120) |
| ST71 | Level Supply Developer (only Types 5270, 5272, 5273) |
| ST72 | Level Supply Fixer (only Types 5270, 5272, 5273) |
| ST73 | Level Disposal Developer (only Types 5270, 5272, 5273) |
| ST74 | Level Disposal Fixer (only Types 5270,5272,5273) |
| ST75 | Temperature Developer SENS1 |
| ST76 | Level Fixer 2 LEV_3 |
| ST77 | Temperature Dryer SENS3 |
| ST78 | Temperature Fixer 2 SENS2 |
| ST79 | Level Supply Anti-Algae (only Types 5270, 5272, 5273) |
| ST81 | RS232 interface RK188pro (only 5120, 5270/105) |
| ST85 | Buzzer |
| ST86 | Transformer |
| ST87 | Film-Jam-Sensor (only Types 5120, 5270/105) |
| ST88 | Chemical Modul - Sensors (only Type 5120) |
| Coding Switches ST57, 62, 63, 64, 65, 70, 82 all open | |

| LED | Description |
|------|-------------|
| D21 | +24V |
| D23 | +24V2 |
| D53 | +5V |
| D54 | +12 MOT |
| D55 | Circ |
| D56 | +12V |
| D57 | DevRepl |
| D58 | Clutch |
| D59 | Lift |
| D60 | Supply |
| D61 | Drain |
| D62 | Fan2 |
| D63 | Fan1 |
| D64 | HeatF |
| D65 | Blowe |
| D66 | IR |
| D67 | HeatD |
| D70 | |
| D167 | +12V2 |
| D172 | FixRepl |
| D174 | FilmOut |

PCB1 (GS1)



Section 8

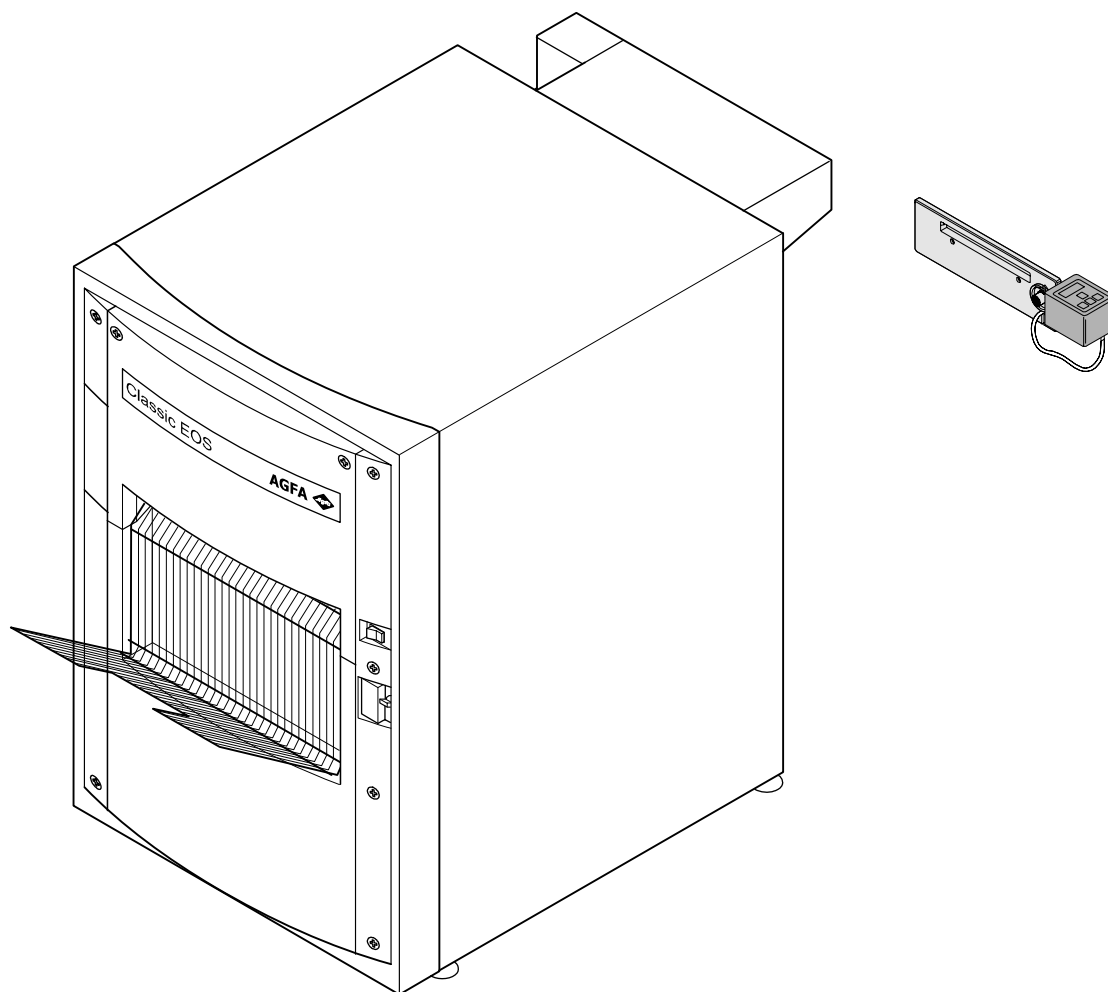
contains exploded drawings for the identification of the spare parts in the machine with order numbers

Document No: DD+DIS022.05M

CLASSIC E.O.S. / E.O.S. CL

Type 5270/0100/0105

Edition 6, Revision 4



Internal update: 8

CONFIDENTIALITY NOTE:

Use, dissemination, distribution or reproduction of this document by unauthorized personnel is not permitted and may be unlawful.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

**WARNING:**

Improper operation or service activities may cause damage or injuries.

**INSTRUCTION:**

- (1) Read the "Generic Safety Directions" document (see MEDNET GSO => General Info => Agfa HealthCare => Publications => Service Manual) prior to attempting any operation, repair or maintenance task on the equipment.
- (2) Strictly observe all safety directions within the "Generic Safety Directions" and on the product.

**WARNING:**

Hazards may be introduced because of component failure or improper operation.

**INSTRUCTION:**

- Replace defective parts with Agfa HealthCare original spare parts.
- Use only tools and measuring instruments which are suitable for the procedure.
- Only approved Agfa HealthCare accessories must be used. For a list of compatible accessories contact your local Agfa HealthCare organization or www.agfa.com

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Document History

| Edition, Revision | Release Date | Changes compared to previous version 6.3 |
|-------------------|--------------|--|
| 6.4 | 11-2007 | Spare Parts List completely revised |



Contact

Spare Parts ordering

Europe orderprocessing-europe.matrium@eads.com
Overseas orderprocessing-overseas.matrium@eads.com

Spare Parts returns

Worldwide returns.matrium@eads.com



NOTE:

For Recycling Information please refer to:

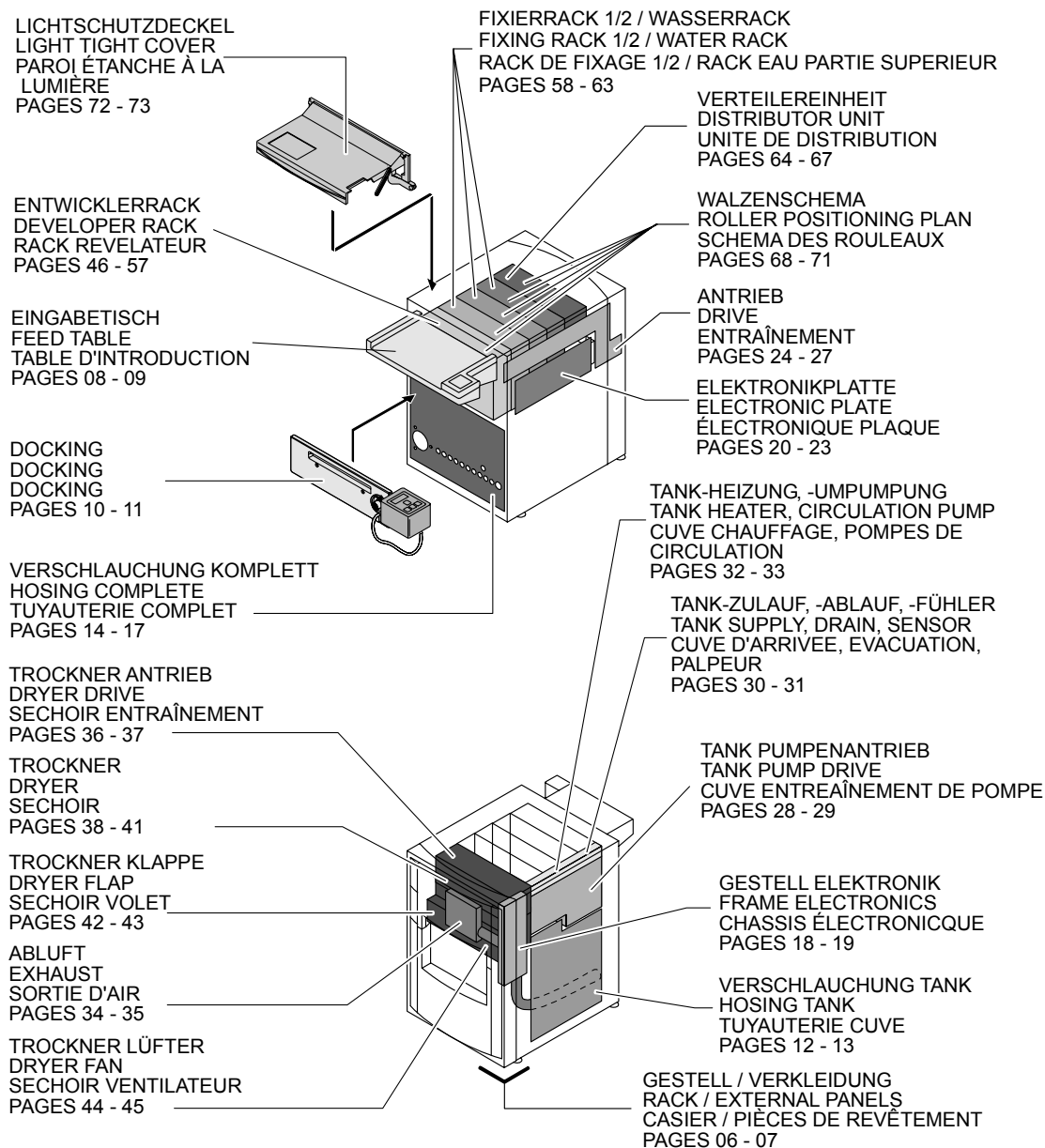
<http://intra.agfanet/cd/ep/ehs.nsf>

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Contents

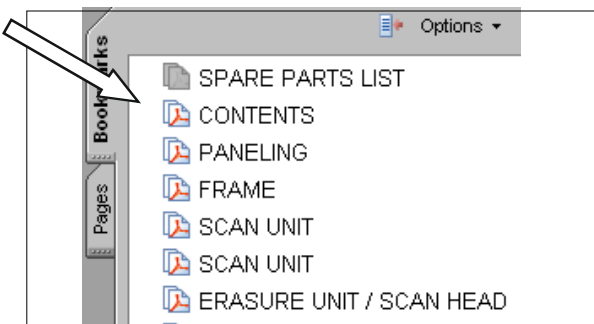


DOCUMENT CONTROL NOTE:

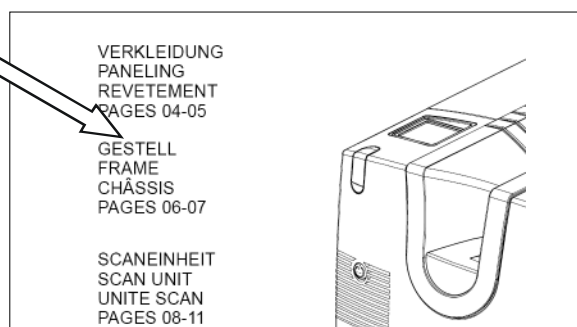
The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

► How to navigate the spare parts list online with the Acrobat Reader

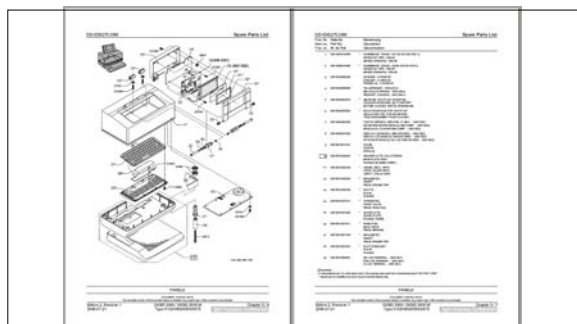
- (1) Open Bookmarks
- (2) Click on "CONTENTS"



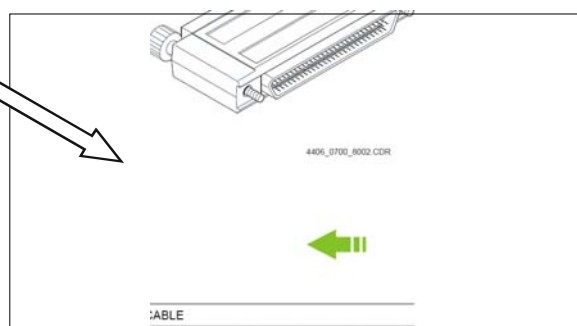
- (3) See overview of the modules
- (4) Click on requested module

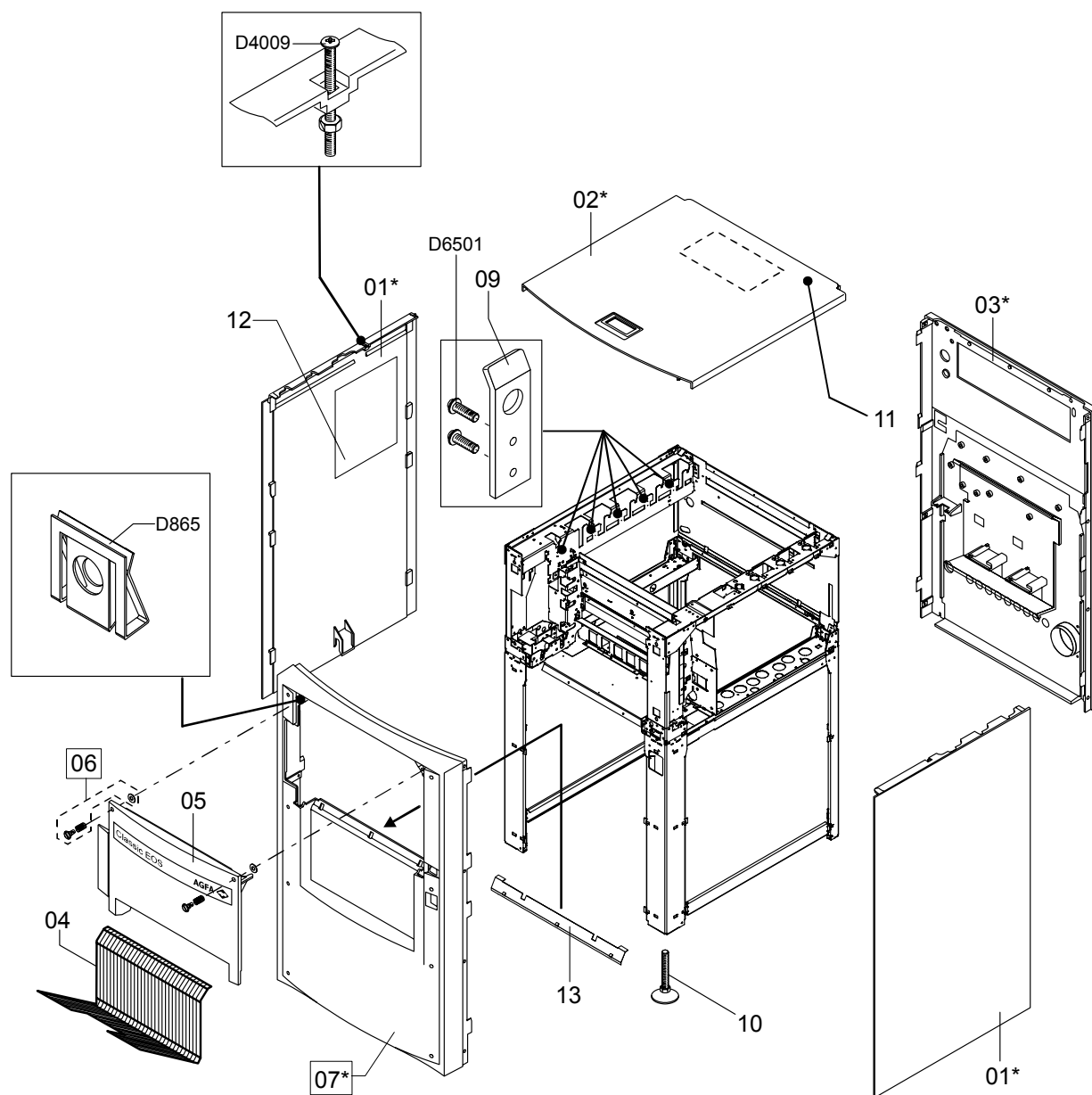


- (5) Appropriate page opens



- (6) Click on green arrow to navigate back to the overview of the modules





5270_0100_0105_8001.CDR



EXTERNAL PANELS

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9527031211 | * SEITENWAND, LACKIERT SIDE WALL, VARNISHED PAROI LATÉRALE, VARNI |
| 2 | CM+9527031603 | * DECKEL KPL. COVER COMPLETE COUVERCLE COMPLET |
| 3 | CM+9527031111 | * VORDERWAND, LACKIERT FRONT WALL, VARNISHED PAROI FRONTALE, VERNI |
| 4 | CM+9521036011 | DRAHTSCHUTE CURIX HT 330-U WIRE CHUTE CURIX HT 330-U RECEPTACLE EN MÉTAL CURIX HT 330-U |
| 5 | CM+9527090902 | RÜCKWAND Klappe REAR PANEL FLAP PANNEAU ARRIÈRE VOLET |
| <input type="checkbox"/> 6 | CM+9527091501 | VERSCHLUßZAPFEN KOMPLETT STUD COMPLETE PIVOT DE VERROUILLAGE COMPLETE |
| <input type="checkbox"/> 7 | CM+9527090801 | * RÜCKWAND REAR PANEL PANNEAU ARRIÈRE |
| 8 | CM+9033175760 | AUFSTECKHALTERUNG SLIP-ON MOUNT FIXATION EMBOITABLE |
| 9 | CM+9522010111 | HALTER HOLDER FIXATION |
| 10 | CM+9037150150 | STELLSCHRAUBE TYP TS40 M10X85 SET SCREW TYPE TS40 M10X85 VIS DE REGLAGE TYPE TS40 M10X85 |
| 11 | CM+9527080016 | KLEBESCHILD WALZENSCHHEMA V2 ADHESIVE LABEL ROLLER POSITIONING PLAN V2 ÉTIQUETTE ADHÉSIVE SCHEMA DES ROULEAUX V2 |
| 12 | CM+9527011060 | * KLEBESCHILD ELEKTRONIK ADHESIVE LABEL ELECTRONIC ÉTIQUETTE ADHÉSIVE ÉLECTRONIQUE |
| 13 | CM+9527031441 | WINKELLEISTE BRACKET BAR REGLETTE COUDEE |

☐ = Assembly

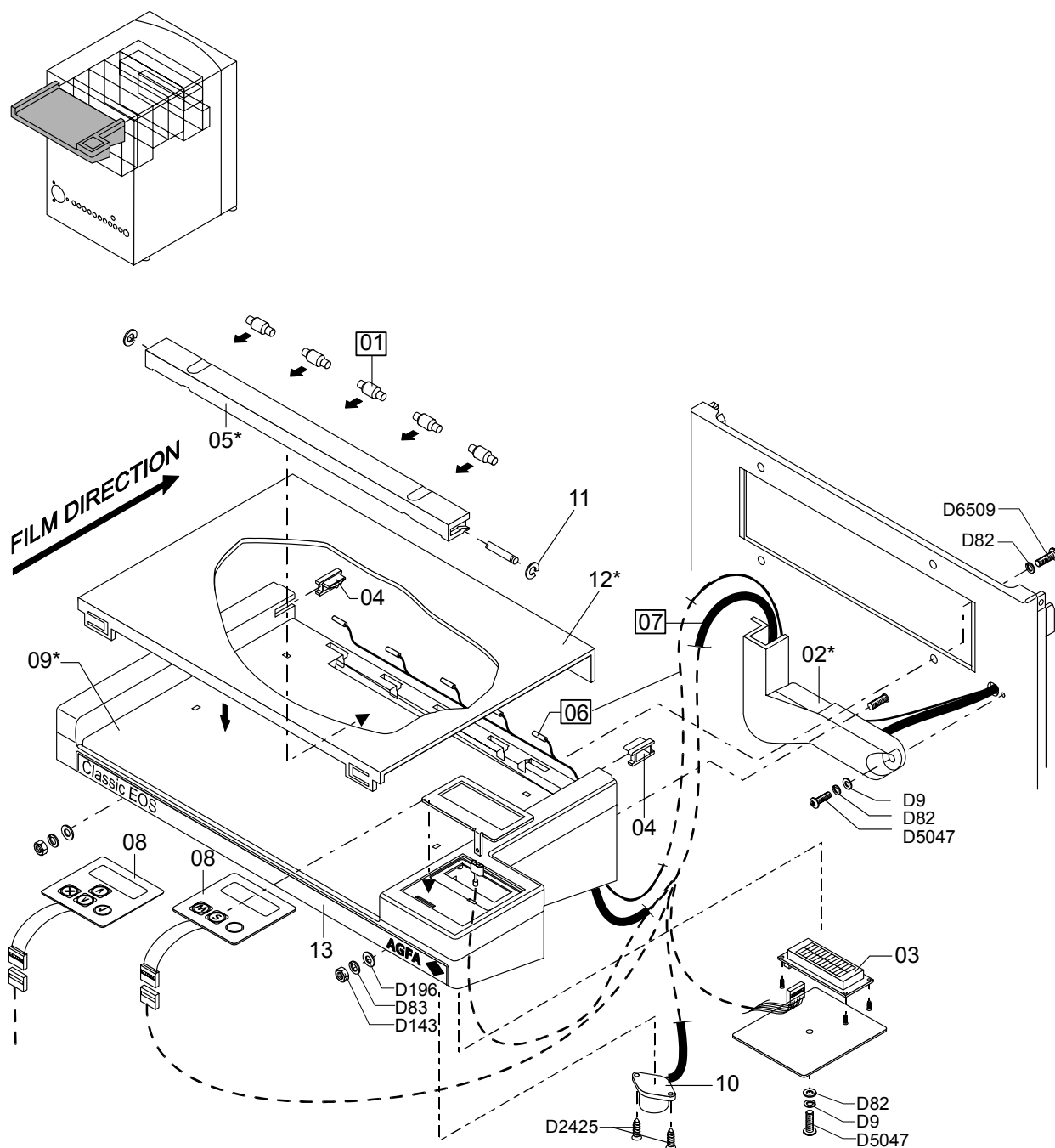
D = Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* = No wearing part.

EXTERNAL PANELS

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8002.CDR



FEED TABLE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. | Teile-Nr. Part No. | Benennung Description Denomination |
|----------------------------|-----------------------|--|
| Pos. no. | Nr. de Ref. | |
| <input type="checkbox"/> 1 | CM+9522016801 | ABTASTROLLE DETECTOR ROLLER GALET DE DÉTECTION |
| 2 | CM+9527031151 | * ABDECKUNG DISPLAYKABEL COVER DISPLAYCABLE COUVERCLE CABLE DE AFFICHAGE |
| 3 | CM+9044282270 | LCD ANZEIGE LCD DISPLAY DISPLAY LCD |
| 4 | CM+9527030250 | RASTTEIL LATCH CRAN D'ARRET |
| 5 | CM+9527030314 | * LEISTE, LACKIERT BAR, VARNISHED REGLETTE, VARNI |
| <input type="checkbox"/> 6 | CM+9527070801 | ROLLENABTASTUNG ROLLER SCANNING DÉTECTION CYLINDRES |
| <input type="checkbox"/> 7 | CM+9527070902 | LEITUNG DISPLAY 330 SOLO E.O.S. LINE DISPLAY 330 SOLO E.O.S. CABLE AFFICHAGE 330 SOLO E.O.S. |
| 8 | CM+9042664240 | FOLIENASTATUR - TYP 5270/100 AB FN 2200 TOUCH KEY - TYPE 5270/100 FROM SN 2200 CLAVIER TACTILE - TYPE 5270/100 A PARTIR DE NS 2200 |
| 8 | CM+9042664030 | FOLIENASTATUR - TYP 5270/100 BIS FN 2199 TOUCH KEY - TYPE 5270/100 UP TO SN 2199 CLAVIER TACTILE - TYPE 5270/100 JUSQU'AU NS 2199 |
| 9 | CM+9527095000 | * EINGABETISCH FEED TABLE PLATEAU D'INTRODUCTION |
| 10 | CM+9523024300 | SUMMER BUZZER BUZZER |
| 11 | CM+9943230250 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 12 | CM+9527030211 | * TISCHBLECH TABLE PLATE PLAQUE DE TABLE |
| 13 | CM+9527090010 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |

☐ = Assembly

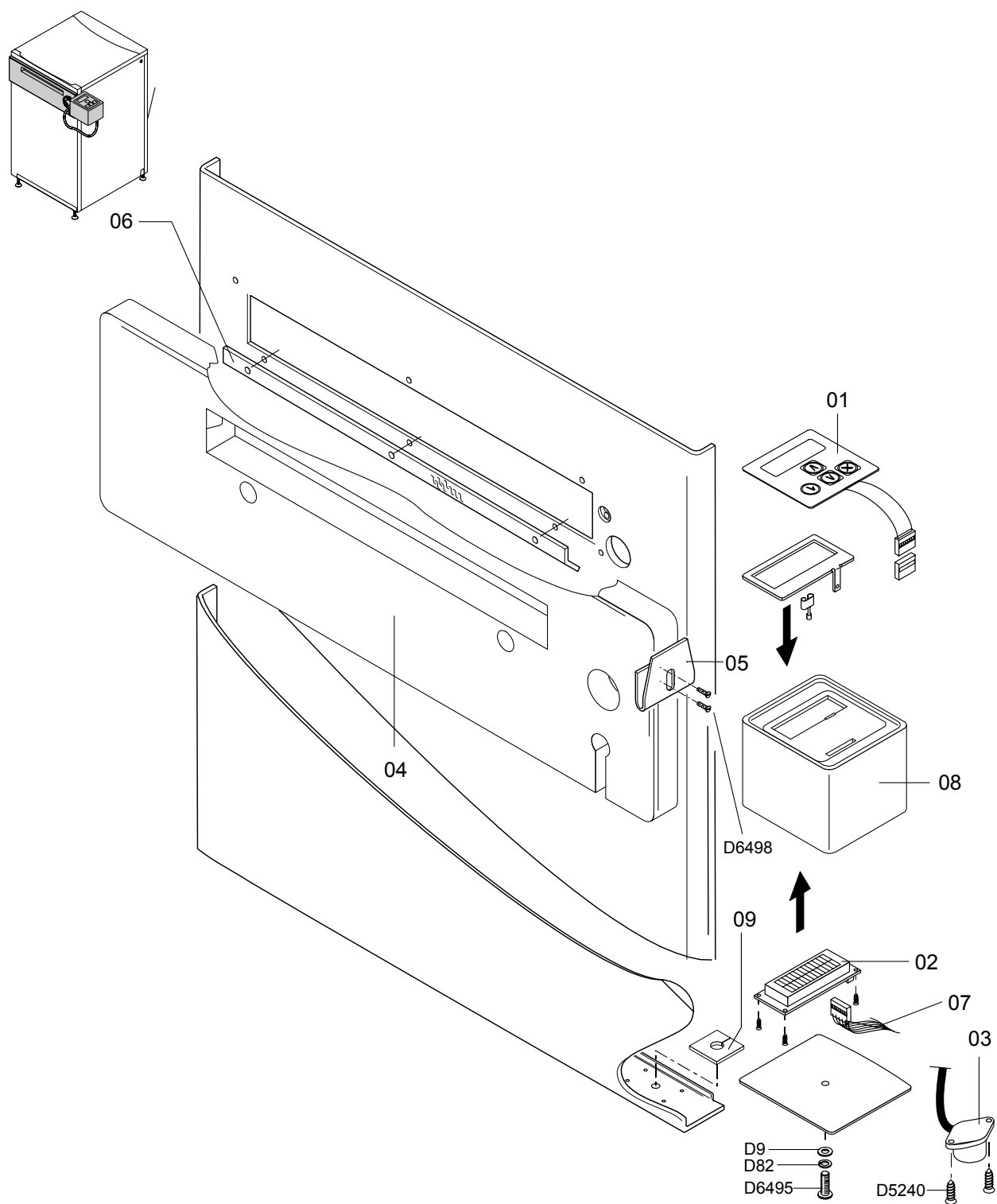
D = Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* = No wearing part.

FEED TABLE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8003.CDR



DOCKING

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9042664240 | FOLIENASTATUR TOUCH KEY CLAVIER TACTILE |
| 2 | CM+9044282270 | LCD ANZEIGE LCD DISPLAY DISPLAY LCD |
| 3 | CM+9523024300 | SUMMER BUZZER BUZZER |
| 4 | CM+9527019640 | PLATTE DOCKING PLATE DOCKING PLAQUE DOCKING |
| 5 | CM+9527019660 | KLEMMTEIL CLAMPING PART PIECE DE SERRAGE |
| 6 | CM+9527320600 | LEITBLECH GUIDE PLATE TOLE DE GUIDAGE |
| 7 | CM+9527070902 | LEITUNG DISPLAY 330 SOLO E.O.S. LINE DISPLAY 330 SOLO E.O.S. CABLE AFFICHAGE 330 SOLO E.O.S. |
| 8 | CM+9527321110 | BEDIENGEHÄUSE CONTROL PANEL BOX BOITIER DE COMMANDE |
| 9 | CM+9527337720 | DICHTUNGSPLATTE SEALING PLATE PLAQUE D'ETANCHEITE |

☐ =Assembly

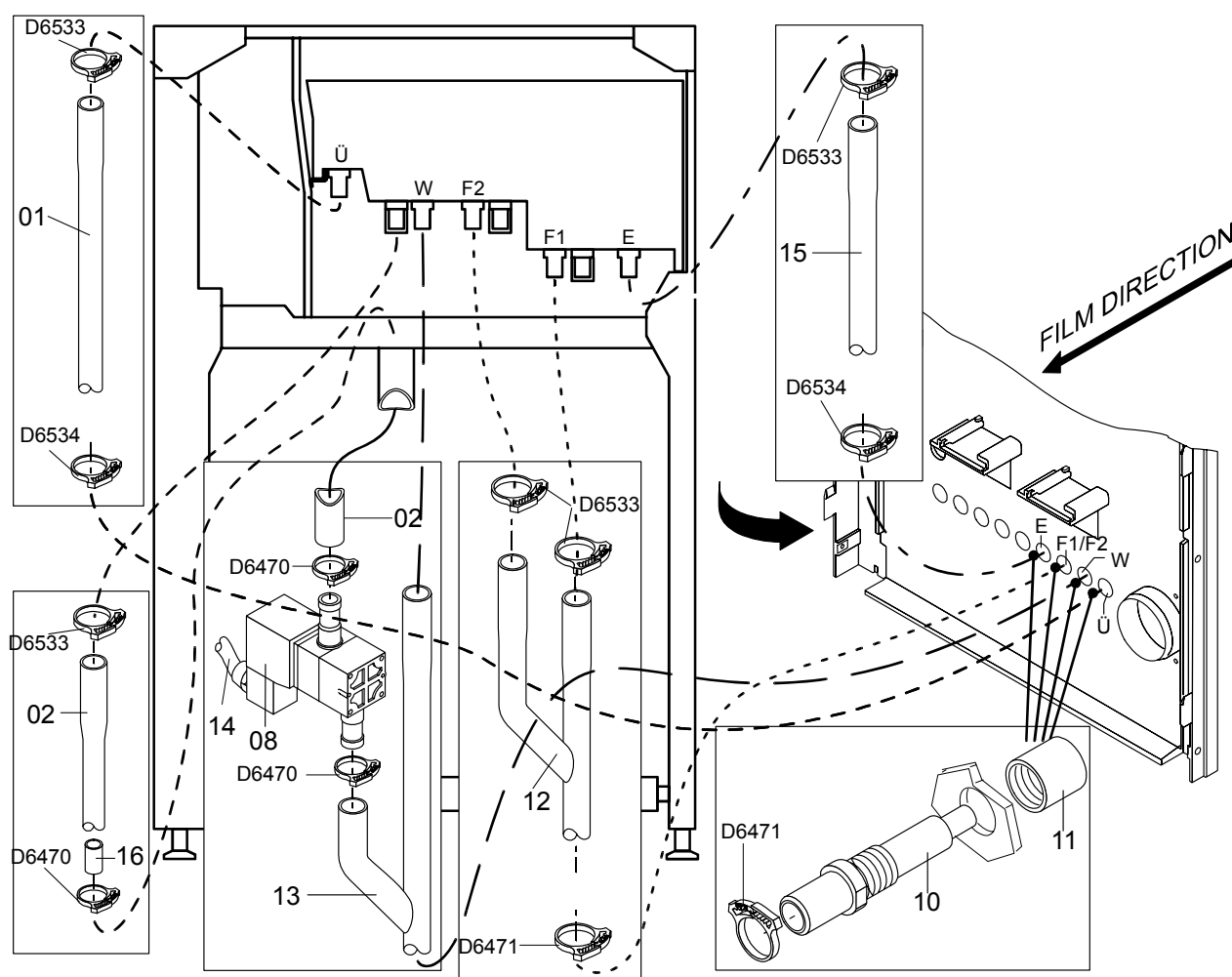
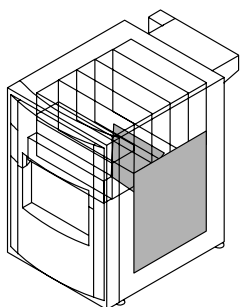
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DOCKING

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8004.CDR



HOSING TANK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9527050770 | SCHLAUCH ÜBERLAUFWANNE TANK HOSE OVERFLOW TRAY TUYAU CUVETTE TROP PLEIN |
| 2 | CM+9527050781 | SCHLAUCH HOSE TUYAU |
| 3 | CM+9034200440 | Y-VERBINDUNG Y-CONNECTING CONNECTION Y |
| 4 | CM+9037170130 | SCHLAUCHSCHELLE 28,5 - 32,5 HOSE CLAMP 28,5 - 32,5 COLLIER DE SERRAGE 28,5 - 32,5 |
| 5 | CM+9037200220 | SCHLAUCHSCHELLE 21,8 - 25,1 HOSE CLAMP 21,8 - 25,1 COLLIER DE SERRAGE 21,8 - 25,1 |
| 6 | CM+9037200300 | SCHLAUCHSCHELLE 17,8 - 20,4 HOSE CLAMP 17,8 - 20,4 COLLIER DE SERRAGE 17,8 - 20,4 |
| 7 | CM+9037200400 | SCHLAUCHSCHELLE SNP-22 HOSE CLAMP SNP-22 COLLIER DE SERRAGE SNP-22 |
| 8 | CM+9039501880 | MAGNETVENTIL ABLAUF 2/2-WEGE 24V (NO) SOLENOID VALVE, DRAIN ELECTROVANNE, EVACUATION |
| 10 | CM+9521075041 | SCHLAUCHANSCHLUSS 20/16 HOSE CONNECTION 20/16 RACCORD TUYAU 20/16 |
| 11 | CM+9521075050 | GEWINDEBUCHSE THREADED BUSH DOUILLE FILETEE |
| 12 | CM+9527050750 | Y-SCHLAUCH Y-HOSE Y-TUYAU |
| 13 | CM+9527050721 | Y-SCHLAUCH Y-HOSE Y-TUYAU |
| 14 | CM+9527074300 | KABEL 2POL. MAGNETVENTIL ABLAUF CABLE 2POL. SOLENOID VALVE DRAIN OUTLET CABLE 2POL. ELECTROVANNE EVACUATION |
| 15 | CM+9527050740 | SCHLAUCH E HOSE D TUYAU R |
| 16 | CM+9527050520 | ROHR PIPE TUBE |

□=Assembly

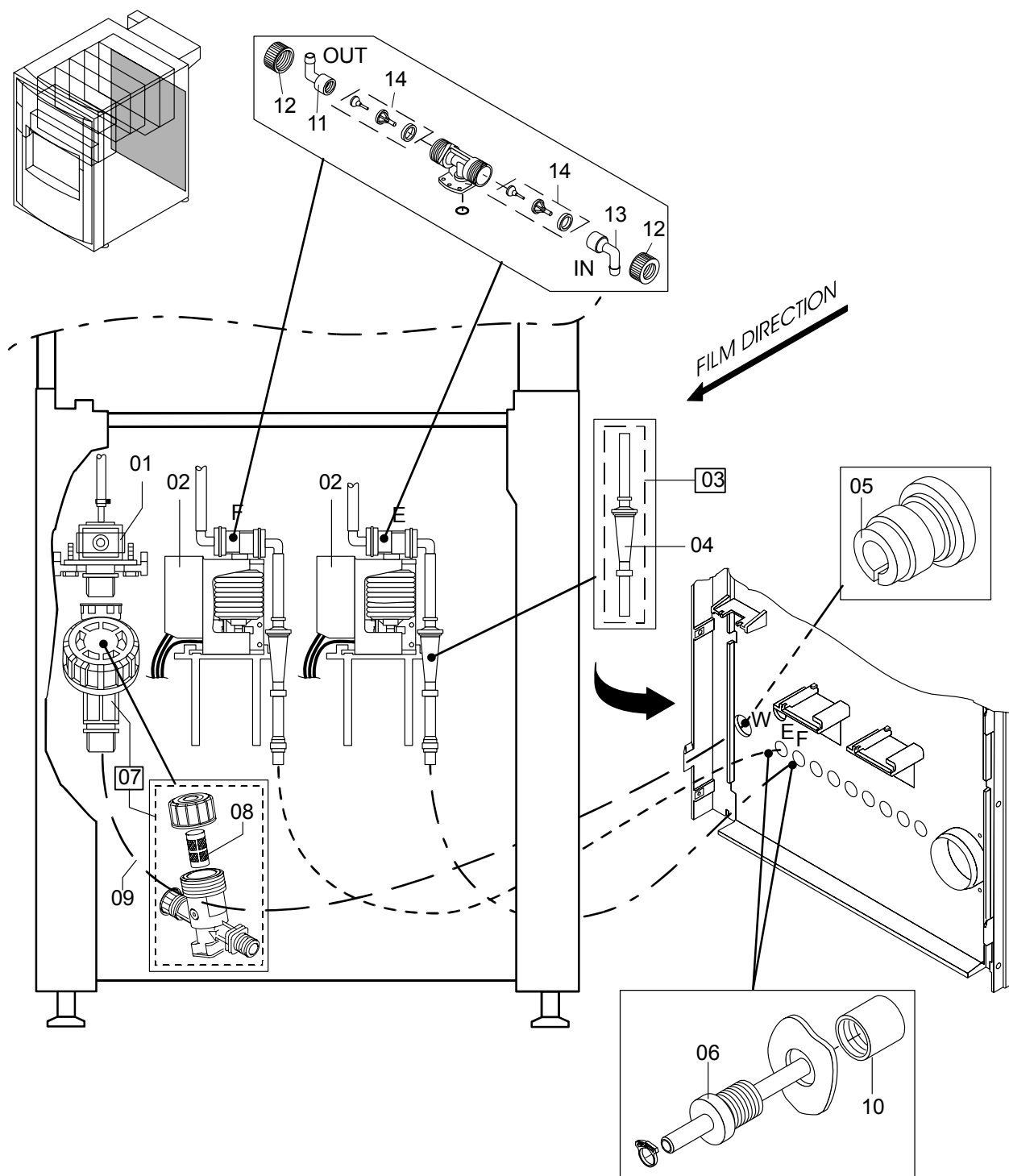
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

HOSING TANK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8005.CDR

HOSING COMPLETE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9042421340 | OPTION : MAGNETVENTILZULAUF 24V (NC) OPTION: SOLENOID VALVE SUPPLY 24V (NC) OPTION: SOUPAPE MAGNETIQUE ARRIVEE 24V (NC) |
| 2 | CM+9043172060 | DOSIERPUMPE METERING PUMP POMPE DE DOSAGE |
| <input type="checkbox"/> 3 | CM+9521072701 | FILTER VOLLSTÄNDIG FILTER COMPLETE FILTRE COMPLET |
| 4 | CM+9890412270 | FILTER FILTER FILTRE |
| 5 | CM+9521075120 | SCHLAUCHDURCHFÜHRUNG HOSE PASSAGE PASSAGE DE TUYAUX |
| 6 | CM+9521075161 | SCHLAUCHANSCHLUSS HOSE CONNECTION RACCORD DE TUYAU |
| <input type="checkbox"/> 7 | CM+9034200310 | SCHMUTZFÄNGER DIRT FILTER COLLECTEUR D'IMPURETÉS |
| 8 | CM+9819390110 | FILTER FILTER FILTRE |
| 9 | CM+9036260160 | WASSERZULAUFSCHLAUCH 3/8"X2M WATER SUPPLY HOSE 3/8"X2M TUYAU D'ARRIVÉE D'EAU 3/8"X2M |
| 10 | CM+9521075050 | GEWINDEBUCHSE THREADED BUSH DOUILLE FILETEE |
| 11 | CM+9527092010 | AUSLASS DRAIN SORTIE |
| 12 | CM+9527092020 | ÜBERWURFMUTTER CAP NUT ÉCROU D'ACCOUPLEMENT |
| 13 | CM+9527092030 | EINLASS SUPPLY ENTRÉE |
| 14 | CM+9527092040 | TELLERVENTILEINHEIT DISK VALVE UNIT ENSEMBLE SOUPAPES À DISQUE |

☐ =Assembly

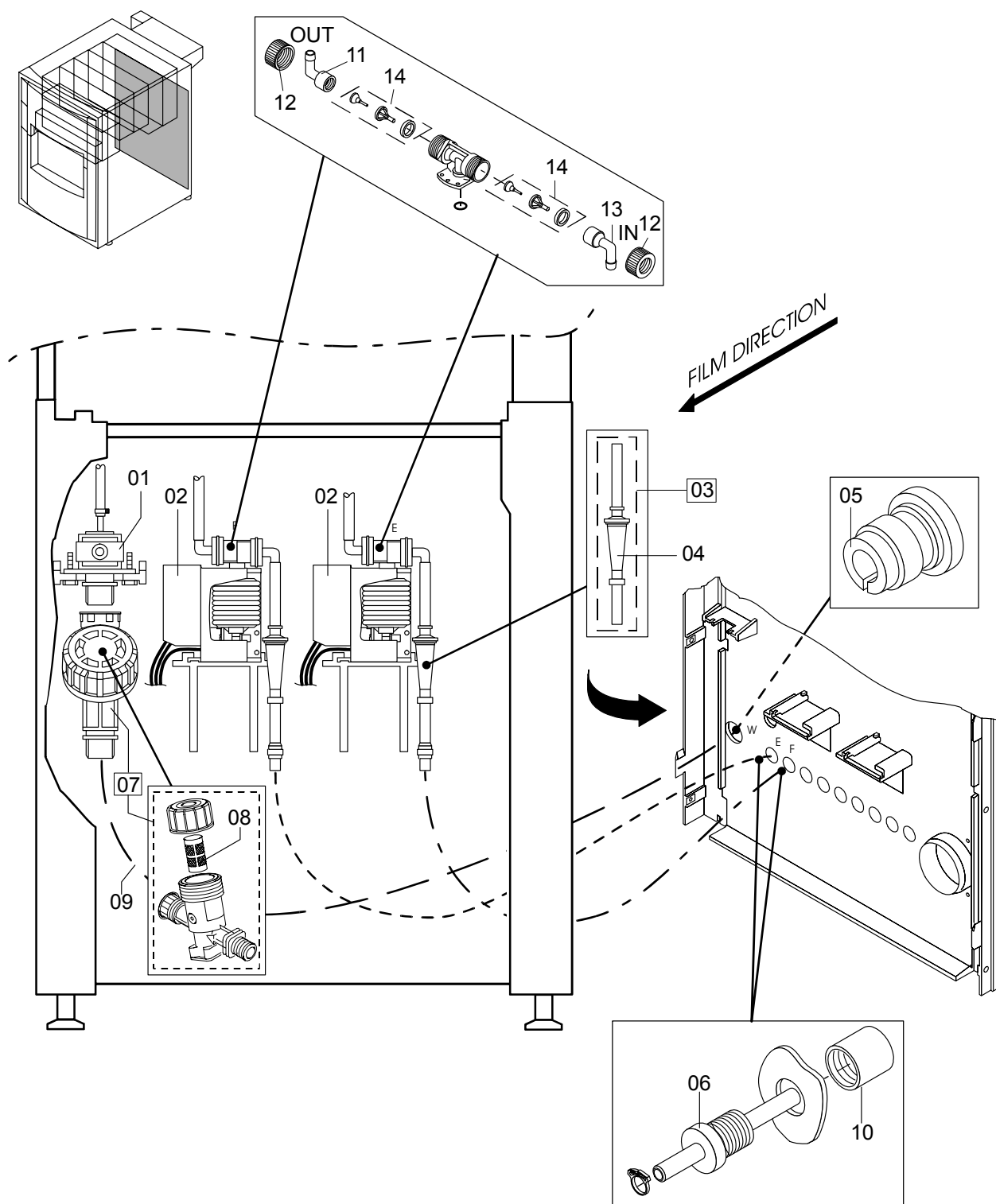
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

HOSING COMPLETE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8006.CDR

HOSING, COMPLETE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9042421340 | OPTION : MAGNETVENTILZULAUF 24V (NC) OPTION: SOLENOID VALVE SUPPLY 24V (NC) OPTION: SOUPAPE MAGNETIQUE ARRIVEE 24V (NC) |
| 2 | CM+9043172390 | DOSIERPUMPE 24V= - TYP 5270/105 AB FN 1138 METERING PUMP 24V= - TYPE 5270/105 FROM SN 1138 POMPE DE DOSAGE 24V= - TYPE 5270/105 A PARTIR DE NS 1138 |
| 2 | CM+9043172060 | DOSIERPUMPE - TYP 5270/105 BIS FN 1137 METERING PUMP - TYPE 5270/105 UP TO SN 1137 POMPE DE DOSAGE - TYPE 5270/105 JUSQU'AU NS 1137 |
| 3 | CM+9521072701 | FILTER VOLLSTÄNDIG FILTER COMPLETE FILTRE COMPLET |
| <input type="checkbox"/> 4 | CM+9890412270 | FILTER FILTER FILTRE |
| 5 | CM+9521075120 | SCHLAUCHDURCHFÜHRUNG HOSE PASSAGE PASSAGE DE TUYAUX |
| 6 | CM+9521075161 | SCHLAUCHANSCHLUSS HOSE CONNECTION RACCORD DE TUYAU |
| 7 | CM+9034200310 | SCHMUTZFÄNGER DIRT FILTER COLLECTEUR D'IMPURETÉS |
| 8 | CM+9819390110 | FILTER FILTER FILTRE |
| 9 | CM+9036260160 | WASSERZULAUFSCHLAUCH 3/8"X2M WATER SUPPLY HOSE 3/8"X2M TUYAU D'ARRIVÉE D'EAU 3/8"X2M |
| 10 | CM+9521075050 | GEWINDEBUCHSE THREADED BUSH DOUILLE FILETEE |
| 11 | CM+9527092010 | AUSLASS DRAIN SORTIE |
| 12 | CM+9527092020 | ÜBERWURFMUTTER CAP NUT ÉCROU D'ACCOUPLEMENT |
| 13 | CM+9527092030 | EINLASS SUPPLY ENTRÉE |
| 14 | CM+9527092040 | TELLERVENTILEINHEIT DISK VALVE UNIT ENSEMBLE SOUPAPES À DISQUE |

☐ =Assembly

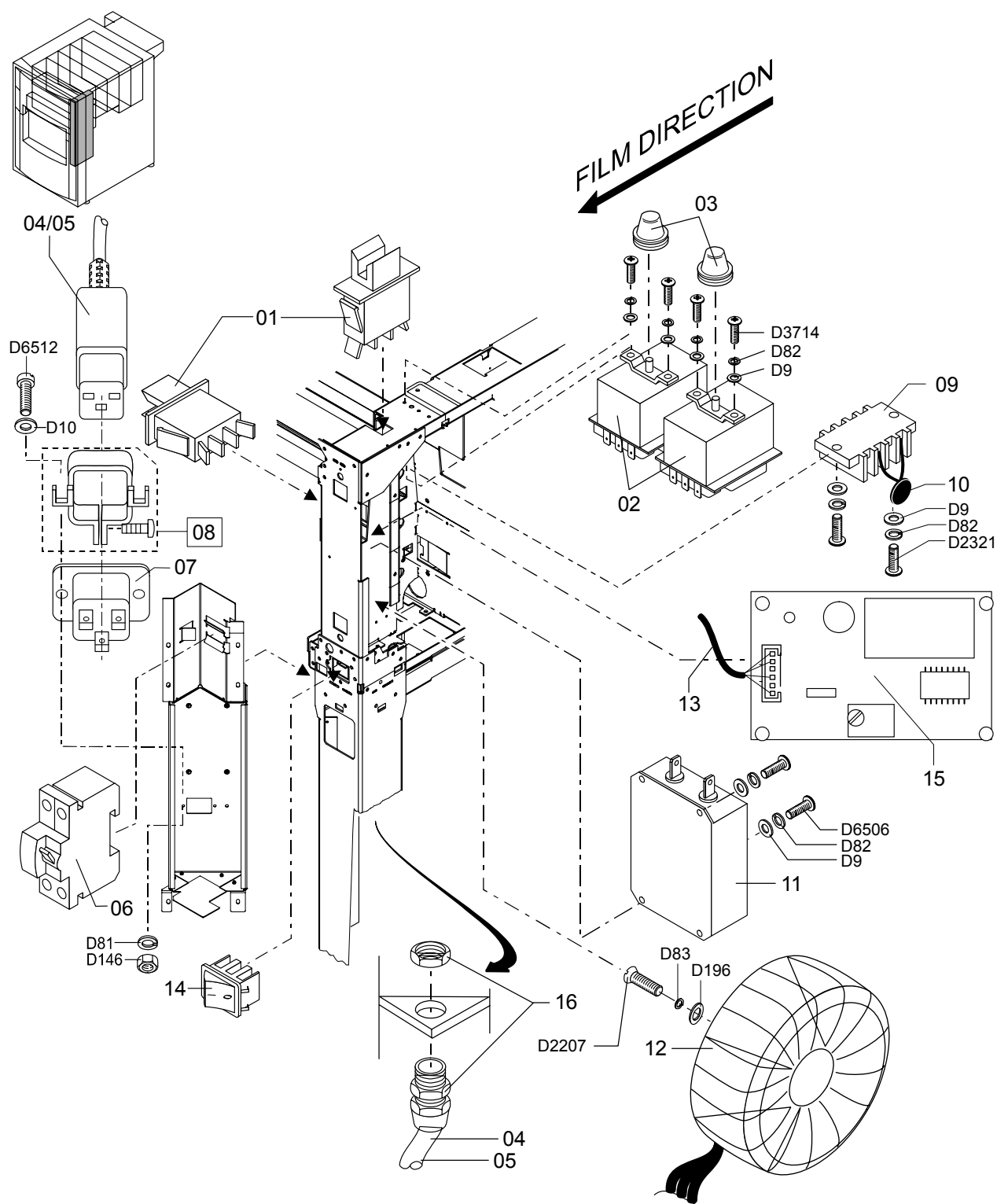
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

HOSING, COMPLETE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8007.CDR

FRAME ELECTRONICS

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9042663040 | TÜR, DECKELSCHALTER CASSETTE UNIT SAFETY SWITCH PORTE, INTERRUPTEUR DE COUVERCLE |
| 2 | CM+9042664520 | TEMPERATURBEGRENZER 63°C ROSTFREI TEMPERATURE LIMITER 63°C STAINLESS LIMITATEUR DE TEMPERATURE 63°C INOXYDABLE |
| 3 | CM+9527011330 | TÜLLE SLEEVE MANCHON |
| 4 | CM+9527074101 | VDE NETZLEITUNG - TYP 5270/100 BIS FN 1139 POWER LINE - TYPE 5270/100 UP TO SN 1139 LIGNE D'ALIMENTATION - TYPE 5270/100 JUSQU'AU NS 1139 |
| 4 | CM+9047710530 | ANSCHLUßLEITUNG SCHUKO - TYP 5270/100 AB FN 1140 CONNECTING LEAD GROUNDED SOCKET - TYPE 5270/100 FROM SN 1140 LIGNE DE RACCORDEMENT - TYPE 5270/100 A PARTIR DE NS 1140 |
| 5 | CM+9047710540 | ANSCHLUßLEITUNG - TYP 5270/100 AB FN 1140 CONNECTING LEAD - TYPE 5270/100 FROM SN 1140 LIGNE DE RACCORDEMENT - TYPE 5270/100 A PARTIR DE NS 1140 |
| 5 | CM+9527074202 | UL NETZLEITUNG - TYP 5270/100 BIS FN 1139 POWER LINE - TYPE 5270/100 UP TO SN 1139 LIGNE D'ALIMENTATION - TYPE 5270/100 JUSQU'AU NS 1139 |
| 6 | CM+9045231710 | FI-SCHALTER 25A/30MA FI-SWITCH 25A/30MA FI-INTERRUPTEUR 25A/30MA |
| 7 | CM+9047189510 | GERÄTESTECKER MACHINE PLUG FICHE MACHINE |
| 8 | CM+9047189560 | HALTEKLAMMER - TYP 5270/100 AB FN 1140 CLAMP - TYPE 5270/100 FROM SN 1140 AGRAFE - TYPE 5270/100 A PARTIR DE NS 1140 |
| 9 | CM+9047202700 | FLACHSTECKERLEISTE - 5270/100 BIS FN4499; 5270/105 FN1137 FLAT CONNECTOR TERMINAL STRIP - 5270/100 UP TO SN 4499; 5270/105 SN 1137 BARRETTE PLATE DE RACCORDEMENT - 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |
| 10 | CM+9044380100 | NTC-14 / 20% - 5270/100 BIS FN4499; 5270/105 FN1137 NTC-14 / 20% - 5270/100 UP TO SN 4499; 5270/105 SN 1137 NTC-14 / 20% - 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |
| 11 | CM+9043660070 | NETZLEITUNGSFILTER 250V/20A LINE FILTER 250V/20A FILTRE DE LIGNE D'ALIMENTATION 250V/20A |
| 12 | CM+9043371800 | RINGKERNTRAFO 19591-P1S12 - 5270/100 AB FN 4500; 5270/105 FN 1138 TRANSFORMER - 5270/100 FROM SN 4500; 5270/105 SN 1138 TRANSFORMATEUR - 5270/100 A PARTIR DE NS4500; 5270/105 NS1138 |
| 12 | CM+9043371820 | RINGKERNTRAFO 18891 - P1S12 - 5270/100 BIS FN 4499; 5270/105 FN 1137 TRANSFORMER - 5270/100 UP TO SN 4499; 5270/105 SN 1137 TRANSFORMATEUR - 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |
| 13 | CM+9527075200 | STROMSENSORKABEL GS1 RD 4POL. CABLE POWER SENSOR GS1 RD 4POL. CABLE CIRCUIT SENSOR GS1 RD 4POL. |
| 14 | CM+9946025522 | WIPPENSCHALTER ROCKER SWITCH TOUCHE A BASCULE |
| 15 | CM+9949936203 | GS STROMSENSORKARTE PCB POWER SENSOR BOARD CARTE D'ALIMENTATION DU DÉTECTEUR |
| 16 | CM+9527090100 | PG VERSCHRAUBUNG - TYP 5270/100 BIS FN 1139 THREADED ADAPTER - TYPE 5270/100 UP TO SN 1139 VISSAGE - TYPE 5270/100 JUSQU'AU NS 1139 |

□=Assembly

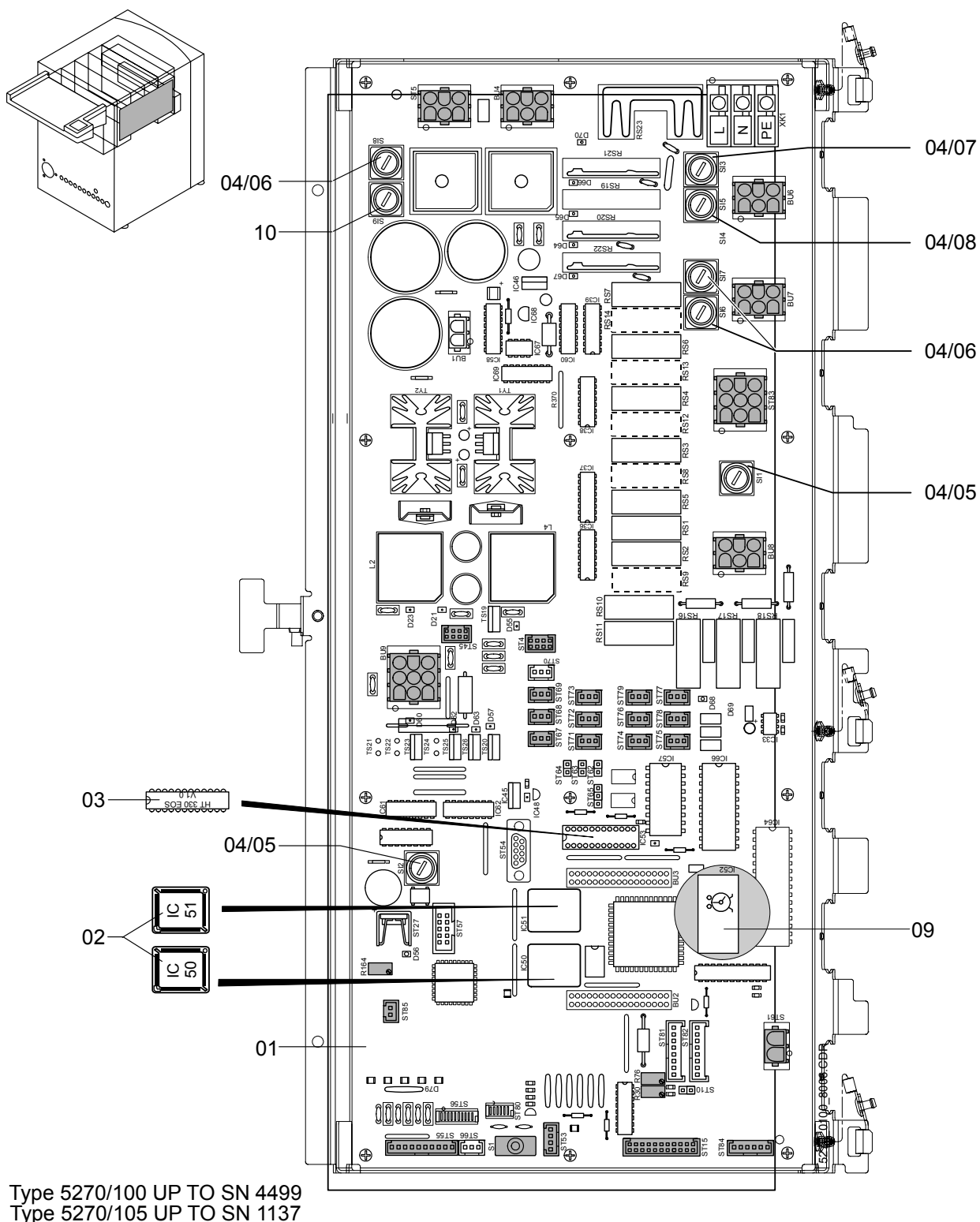
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

FRAME ELECTRONICS

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



ELECTRONIC PLATE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9527079601 | STEUERKARTE COMPACT MIT EPROM CONTROL BOARD COMPACT WITH EPROM BOITE ELECTRONIQUE COMPACT AVEC EPROM |
| 2 | CM+9527093504 | EPROM-SATZ IC50 / IC51 EOSUNIV 1102 EPROM-SATZ IC50 / IC51 EOSUNIV 1102 EPROM-SATZ IC50 / IC51 EOSUNIV 1102 |
| 3 | CM+9527077160 | PLD PROG. IC53 V1001 PLD PROG. IC53 V1001 PLD PROG. IC53 V1001 |
| 4 | CM+9045191300 | RENKVERSCHLUSSKAPPE RETAINER CAP CAPUCHON DE SECURITE |
| 5 | CM+9045197270 | SICHERUNG T 1,25A ---- (SI1 / SI2) FUSE T 1,25A ---- (SI1 / SI2) FUSIBLE T 1,25A ---- (SI1 / SI2) |
| 6 | CM+9045197050 | SICHERUNG T 6,25A ---- (SI6 / SI7 / SI8 / SI9) FUSE T 6,25A ---- (SI6 / SI7 / SI8 / SI9) FUSIBLE T 6,25A ---- (SI6 / SI7 / SI8 / SI9) |
| 7 | CM+9045230350 | SICHERUNG T 10A ---- (SI3) FUSE T 10A ---- (SI3) FUSIBLE T 10A ---- (SI3) |
| 8 | CM+9045197200 | SICHERUNG T 4A ---- (SI5) FUSE T 4A ---- (SI5) FUSIBLE T 4A ---- (SI5) |
| 9 | CM+9044170300 | UHRENBAUSTEIN IC52 CLOCK CHIP IC52 COMPOSANT D'HORLOGE IC52 |
| 10 | CM+9045231510 | SICHERUNG T 8A FUSE T 8A FUSIBLE T 8A |

□=Assembly

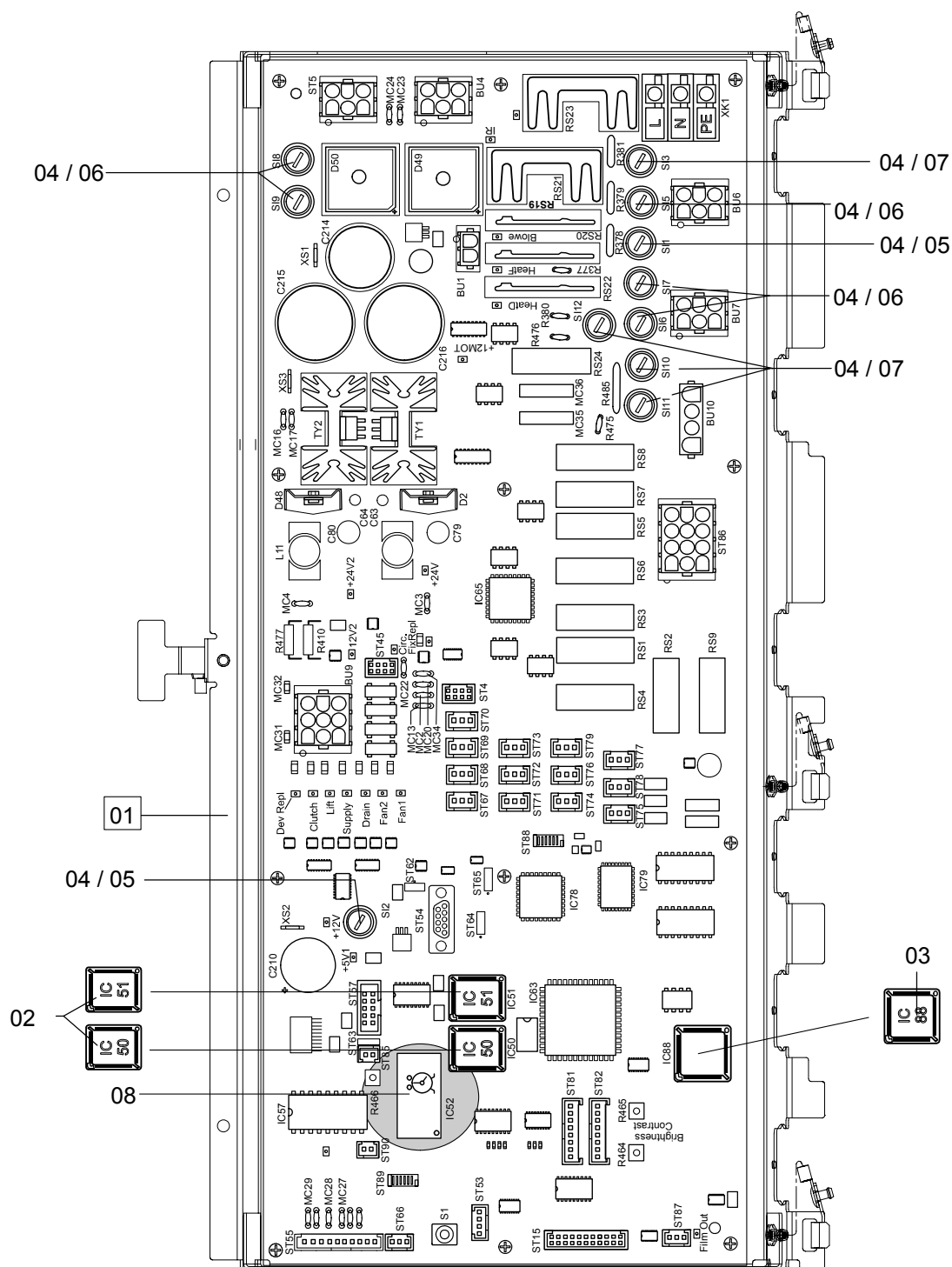
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

ELECTRONIC PLATE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Type 5270/100 FROM SN 4500
Type 5270/105 FROM SN 1138

5270_0100_0105_8009.cdr



ELECTRONIC PLATE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9527094503 | E-KASTEN+STEUERKARTE MIT EPROM ELECTRIC BOX+CONTROL BOARD WITH EPROM BOITE ELECTRONIQUE+CONTROL BOARD AVEC EPROM |
| 2 | CM+9527094103 | EPROM-SATZ IC50/51 CLLC1301 EPROM SET IC50/51 CLLC1301 EPROM VANNES IC50/51 CLLC1301 |
| 3 | CM+9527077170 | PLD PROG. IC88 V1001 PLD PROG. IC88 V1001 PLD PROG. IC88 V1001 |
| 4 | CM+9045191300 | RENKVERSCHLUSSKAPPE RETAINER CAP CAPUCHON DE SECURITE |
| 5 | CM+9045197270 | SICHERUNG T 1,25A - (SI1 / SI2) FUSE T 1,25A - (SI1 / SI2) FUSIBLE T 1,25A - (SI1 / SI2) |
| 6 | CM+9045197050 | SICHERUNG T 6,25A - (SI5 / SI6 / SI7 / SI8 / SI9) FUSE T 6,25A - (SI5 / SI6 / SI7 / SI8 / SI9) FUSIBLE T 6,25A - (SI5 / SI6 / SI7 / SI8 / SI9) |
| 7 | CM+9045230350 | SICHERUNG T 10A - (SI3 / SI10 / SI11 / SI12) FUSE T 10A - (SI3 / SI10 / SI11 / SI12) FUSIBLE T 10A - (SI3 / SI10 / SI11 / SI12) |
| 8 | CM+9044170300 | UHRENBAUSTEIN IC52 (BIS CM+952709450 INDEX 2, SIEHE SIB DD+DIS223.07D) CLOCK CHIP IC52 (UP TO CM+952709450 INDEX 2, SEE SIB DD+DIS223.07E) COMPOSANT D'HORLOGE IC52 (JUSQU'AU CM+952709450 INDEX 2, REGARDEZ SIB DD+DIS223.07F) |
| 8 | CM+9048520120 | SNAPHAT BATTERY (AB CM+952709450 INDEX 3, SIEHE SIB DD+DIS223.07D) SNAPHAT BATTERY (FROM CM+952709450 INDEX 3, SEE SIB DD+DIS223.07E) SNAPHAT BATTERY (A PARTIR DE CM+952709450 INDEX 3, REGARDEZ SIB DD+DIS223.07F) |

□=Assembly

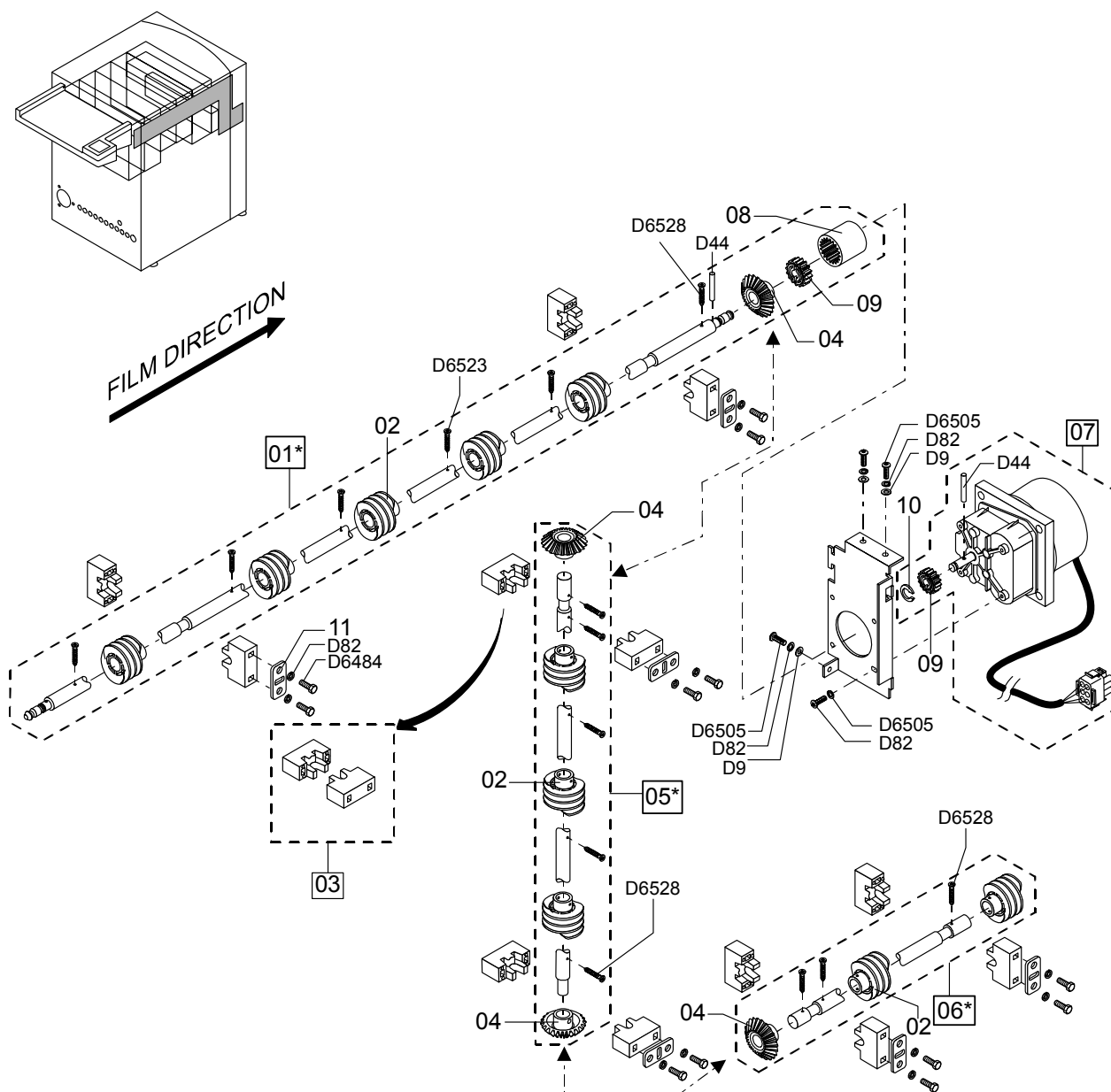
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

ELECTRONIC PLATE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8010.CDR



DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 1 | CM+9527011502 | * ANTRIEBSWELLE RACKS DRIVE SHAFT RACKS ARBRE D'ENTRAINEMENT RACKS |
| 2 | CM+9520061062 | SCHNECKE M=2 / Z=2 / RECHTS WORM GEAR M=2 / TEETH=2 / RHS VIS SANS FIN M=2 / DENTS=2 / A DROIT |
| <input type="checkbox"/> 3 | CM+9527011510 | LAGER BEARING PALIER |
| 4 | CM+9522012731 | KEGELRAD BEVEL GEAR ROUE DENTEE |
| <input type="checkbox"/> 5 | CM+9527066402 | * ANTRIEBSACHSE TROCKNER VERTIKAL DRIVE SHAFT DRYER VERTICAL AXE D'ENTRAINEMENT SECHOIR VERTICAL |
| <input type="checkbox"/> 6 | CM+9527066302 | * ANTRIEBSACHSE TROCKNER HORIZONTAL DRIVE SHAFT DRYER HORIZONTAL AXE D'ENTRAINEMENT SECHOIR HORIZONTALE |
| <input type="checkbox"/> 7 | CM+9527015601 | MOTOR MIT ZAHNRAD / M=1,5 / Z=15 MOTOR WITH GEAR / M=1,5 / T=15 MOTEUR AVEC ROUE DENTEE / M=1,5 / D=15 |
| 8 | CM+9839534160 | KUPPLUNGSROHR PIPE UNION RACCORD |
| 9 | CM+9940211011 | GERADSTIRNRAD M=1,5 / Z=15 SPUR GEAR M=1,5 / T=15 ROUE DENTEE M=1,5 / D=15 |
| 10 | CM+9815762290 | SCHEIBE WASHER RONDELLE |
| 11 | CM+9527011550 | PLATTE FÜR LAGERBEFESTIGUNG PLATE FOR BEARING FASTENING PLAQUE POUR FIXATION DE PALIER |

☐ =Assembly

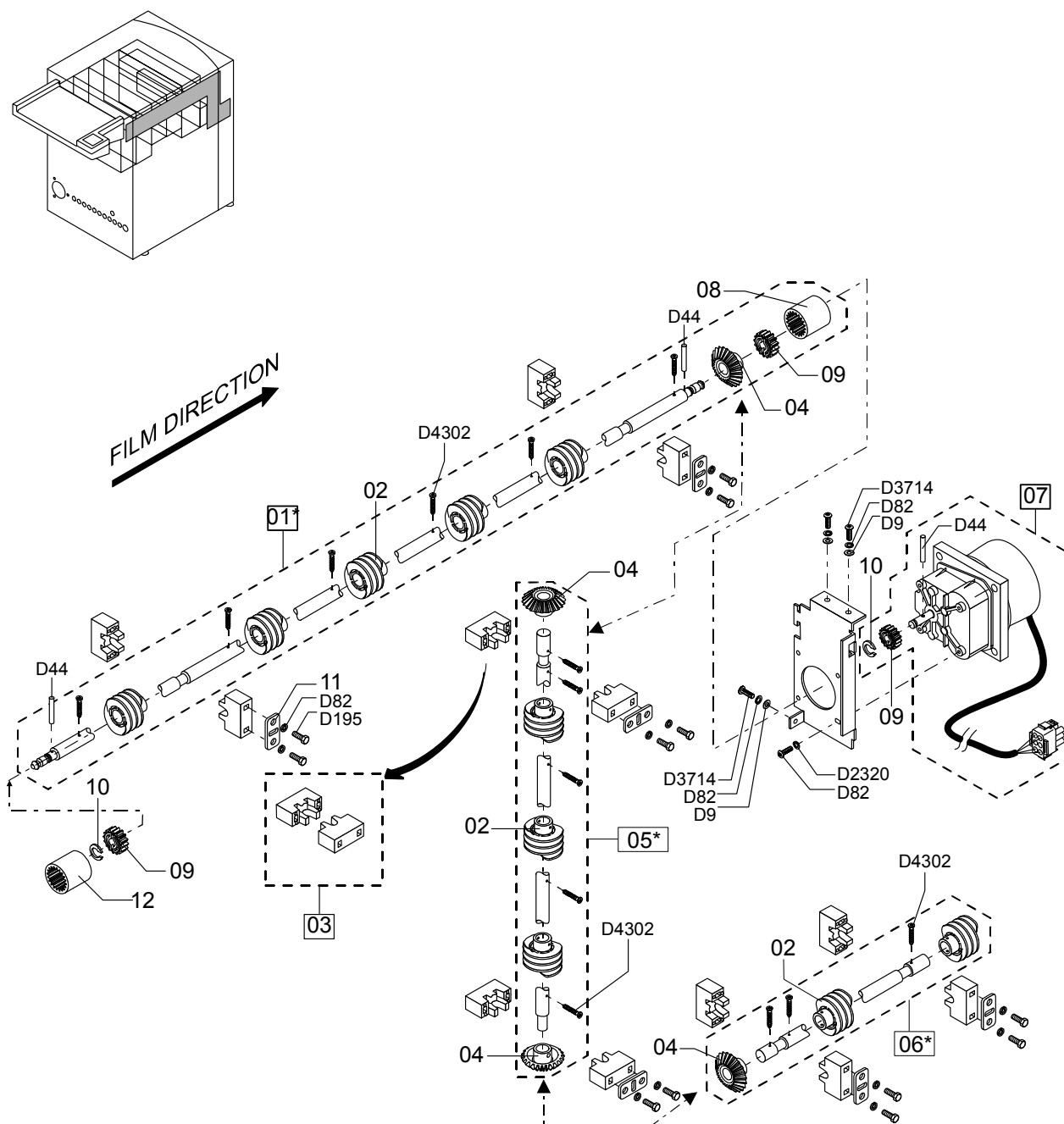
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8011.CDR



DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| <input type="checkbox"/> 1 | CM+9527019700 | * ANTRIEBSWELLE DRIVE SHAFT ARBRE D'ENTRAINEMENT |
| 2 | CM+9520061062 | SCHNECKE M=2 / Z=2 / RECHTS WORM GEAR M=2 / TEETH=2 / RHS VIS SANS FIN M=2 / DENTS=2 / A DROIT |
| <input type="checkbox"/> 3 | CM+9527011510 | LAGER BEARING PALIER |
| 4 | CM+9522012731 | KEGELRAD BEVEL GEAR ROUE DENTEE |
| <input type="checkbox"/> 5 | CM+9527066402 | * ANTRIEBSACHSE TROCKNER VERTIKAL DRIVE SHAFT DRYER VERTICAL AXE D'ENTRAINEMENT SECHOIR VERTICAL |
| <input type="checkbox"/> 6 | CM+9527066302 | * ANTRIEBSACHSE TROCKNER HORIZONTAL DRIVE SHAFT DRYER HORIZONTAL AXE D'ENTRAINEMENT SECHOIR HORIZONTALE |
| <input type="checkbox"/> 7 | CM+9527015601 | MOTOR MIT ZAHNRAD / M=1,5 / Z=15 MOTOR WITH GEAR / M=1,5 / T=15 MOTEUR AVEC ROUE DENTEE / M=1,5 / D=15 |
| 8 | CM+9839534160 | KUPPLUNGSROHR PIPE UNION RACCORD |
| 9 | CM+9940211011 | GERADSTIRNRAD M=1,5 / Z=15 SPUR GEAR M=1,5 / T=15 ROUE DENTEE M=1,5 / D=15 |
| 10 | CM+9815762290 | SCHEIBE WASHER RONDELLE |
| 11 | CM+9527011550 | PLATTE FÜR LAGERBEFESTIGUNG PLATE FOR BEARING FASTENING PLAQUE POUR FIXATION DE PALIER |
| 12 | CM+9946021082 | KUPPLUNGSROHR PIPE UNION RACCORD |
| 13 | CM+9839150310 | SCHEIBE WASHER RONDELLE |

☐ =Assembly

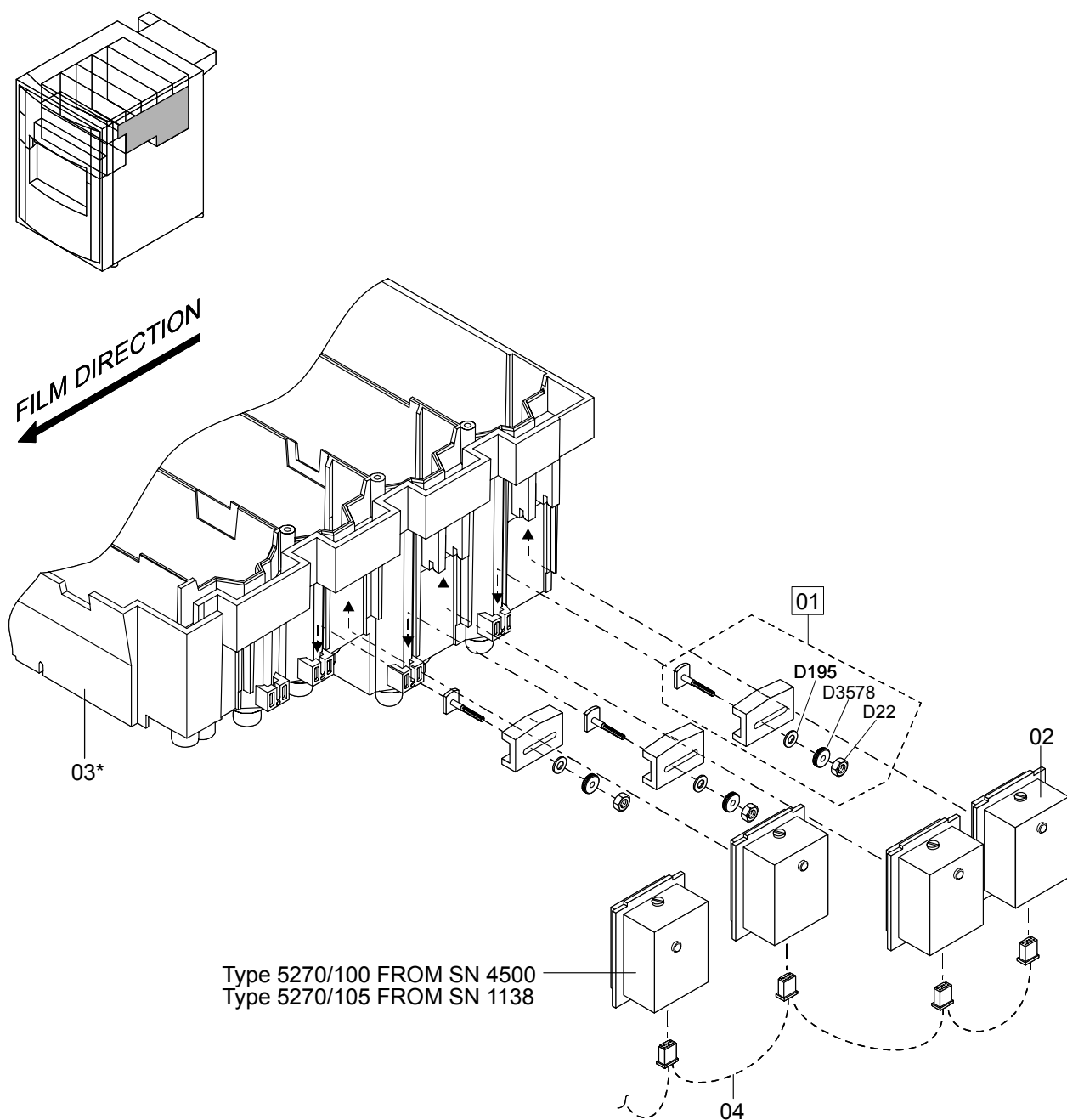
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8012.CDR



TANK PUMP DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| <input type="checkbox"/> 1 | CM+9527090201 | BOLZEN BOLT BOULON |
| 2 | CM+9043083030 | SCHRITTMOTOR DFM 50.1203.7 STEPPER MOTOR DFM 50.1203.7 MOTEUR PAS A PAS DFM 50.1203.7 |
| 3 | CM+9527041525 | * TANK SPRITZTEIL TANK INJECTION-MOLDED CUVE PIÈCE D'INJECTION-MOLDED |
| 4 | CM+9527081900 | KABELBAUM DREHFELDMOTORE 5270/100 BIS FN 4499; 5270/105 FN 1137 WIRE HARNESS 5270/100 UP TO SN 4499; 5270/105 SN 1137 HARNAISE DE CABLE 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |
| 4 | CM+9527081800 | KABELBAUM DREHFELDMOTORE 5270/100 AB FN 4500; 5270/105 FN 1138 WIRE HARNESS 5270/100 FROM SN 4500; 5270/105 SN 1138 HARNAISE DE CABLE 5270/100 A PARTIR DE NS4500; 5270/105 NS1138 |

☐ =Assembly

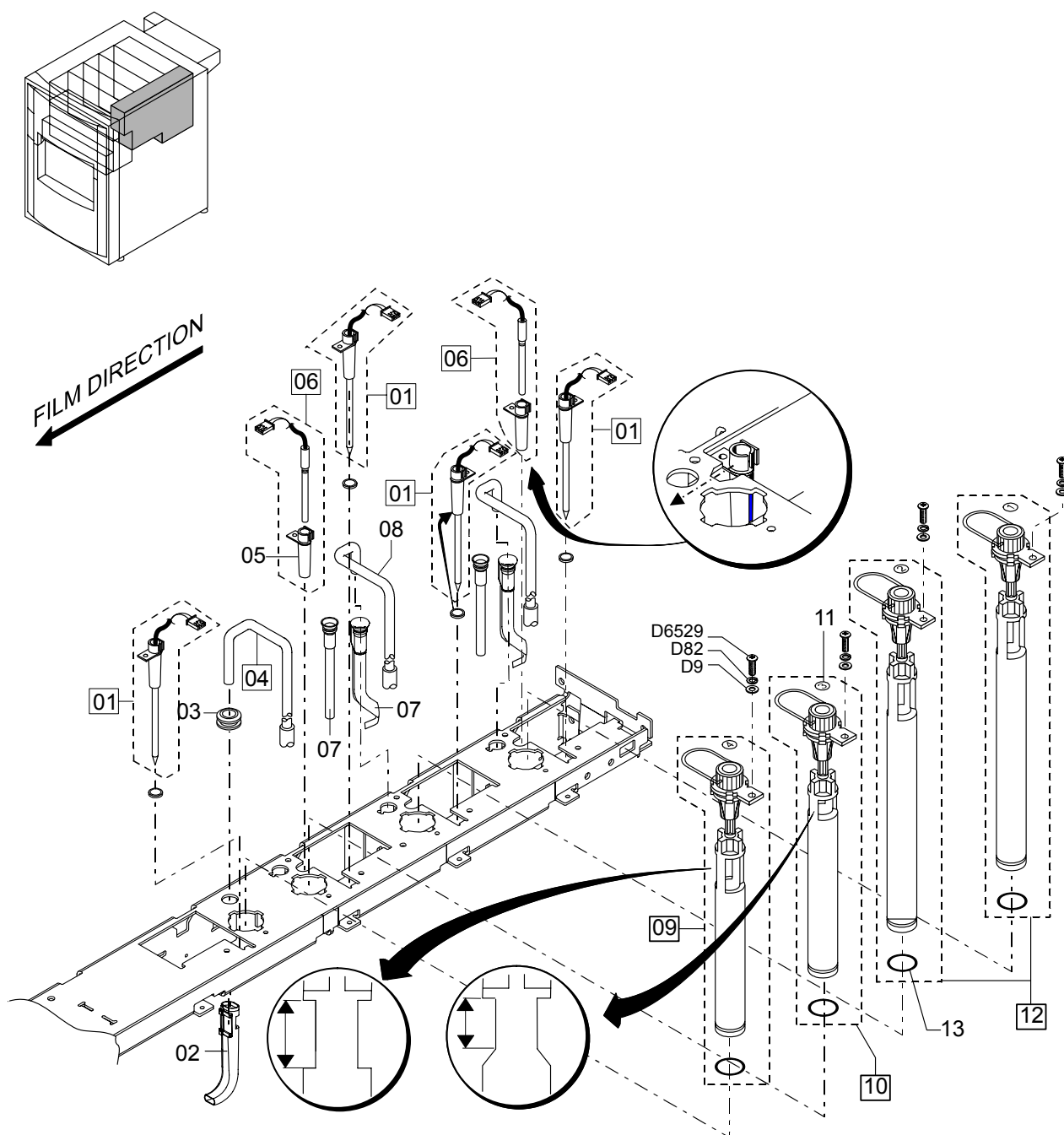
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

TANK PUMP DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8013.CDR



TANK SUPPLY, DRAIN, SENSOR

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| <input type="checkbox"/> 1 | CM+9527091600 | NIVEAUSENSOR LEVEL SENSOR CAPTEUR DE NIVEAU |
| 2 | CM+9840560040 | * ZULAUFTRICHTER WASSER FEED MOUTH WATER ENTONNOIR D'ARRIVEE EAU |
| 3 | CM+9037172700 | TÜLLE SLEEVE MANCHON |
| <input type="checkbox"/> 4 | CM+9527048102 | ROHRKRÜMMER MIT SCHLAUCH PIPE BEND WITH HOSE RACCORD COUDE AVEC TUYAU FLEXIBLE |
| 5 | CM+9527045820 | HALTER FÜR NTC-FÜHLER HOLDER FOR NTC SENSOR FIXATION POUR SONDE NTC |
| <input type="checkbox"/> 6 | CM+9527091700 | TEMPERATURFÜHLER TEMPERATURE SENSOR PALPEUR DE TEMPERATURE |
| 7 | CM+9527045011 | EPDM-ZULAUFROHR - TYP 5270/100 AB FN 2331 FEED TUBE - TYPE 5270/100 FROM SN 2331 TUYAU D'ARRIVEE - TYPE 5270/100 A PARTIR DE NS 2331 |
| 7 | CM+9521021150 | ZULAUFROHR - TYP 5270/100 BIS FN 2330 FEED TUBE - TYPE 5270/100 UP TO SN 2330 TUYAU D'ARRIVEE - TYPE 5270/100 JUSQU'AU NS 2330 |
| 8 | CM+9527045101 | ROHRKRÜMMER MIT SCHLAUCH PIPE BEND WITH TUBE RACCORD COUDE AVEC TUYAU |
| <input type="checkbox"/> 9 | CM+9527048301 | ABLAUF DRAIN OUTLET EVACUATION |
| <input type="checkbox"/> 10 | CM+9527047300 | ABLAUF DRAIN OUTLET EVACUATION |
| 11 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |
| <input type="checkbox"/> 12 | CM+9527045300 | ABLAUF DRAIN OUTLET EVACUATION |
| 13 | CM+9033895240 | O-RING O-RING BAGUE EN O |

☐ =Assembly

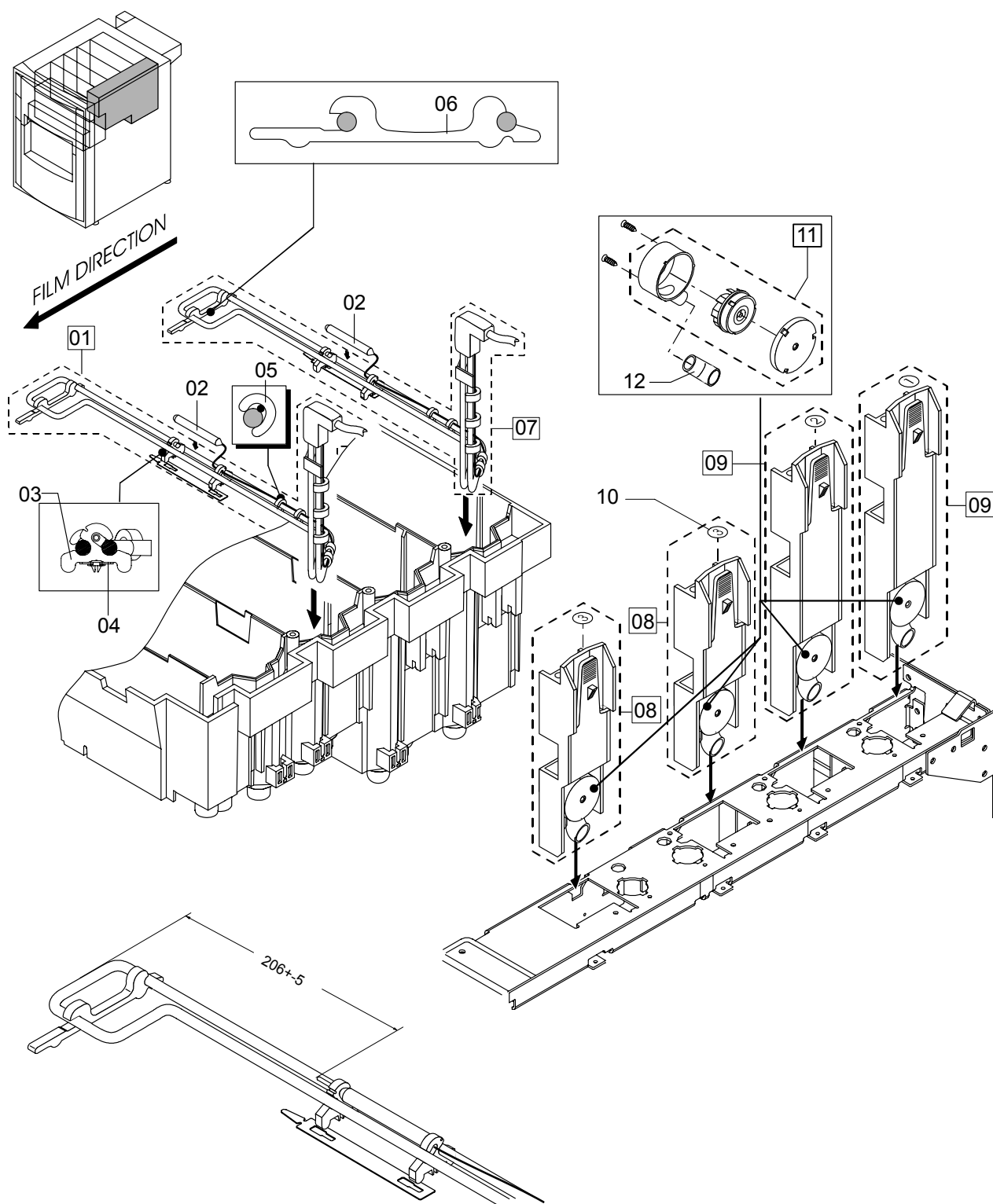
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

TANK SUPPLY, DRAIN, SENSOR

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8014.CDR



TANK HEATER, CIRCULATION PUMP

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| <input type="checkbox"/> 1 | CM+9527047700 | HEIZUNG MIT ÜBERHITZUNGSSCHUTZ MONTIERT HEATER WITH THERMAL CUTOUT CHAUFFAGE AVEC PROTECTION DE SURCHAUFFE |
| 2 | CM+9042664520 | TEMPERATURBEGRENZER 63°C ROSTFREI TEMPERATURE LIMITER 63°C STAINLESS LIMITATEUR DE TEMPERATURE 63°C INOXYDABLE |
| 3 | CM+9527045760 | HALTEPLATTE HOLDING PLATE PLAQUE DE RETENUE |
| 4 | CM+9527045751 | ABSTANDSBLECH ROSTFREI SPACER PLATE STAINLESS TÔLE D'ÉCARTEMENT INOXYDABLE |
| 5 | CM+9527045770 | HALTER FÜR KAPILLARROHRHEIZUNG HOLDER FOR CAPILLARY TUBE HEATING FIXATION POUR CHAUFFAGE PAR TUBE CAPILLAIRE |
| 6 | CM+9527045781 | HALTEPLATTE, LANG HOLDING PLATE, LONG PLAQUE DE RETENUE, LONGUE |
| <input type="checkbox"/> 7 | CM+9527045700 | HEIZUNG MIT ÜBERHITZUNGSSCHUTZ MONTIERT HEATER WITH THERMAL CUTOUT CHAUFFAGE AVEC PROTECTION ANTI-SURCHAUFFE |
| <input type="checkbox"/> 8 | CM+9527047403 | UMPUMPUNG CIRCULATION PUMP POMPAGE DE CIRCULATION |
| <input type="checkbox"/> 9 | CM+9527045403 | UMPUMPUNG CIRCULATION PUMP POMPAGE DE CIRCULATION |
| 10 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ÉTIQUETTE ADHÉSIVE |
| <input type="checkbox"/> 11 | CM+9521026200 | PUMPENGHÄUSE BLAU PUMP HOUSING BLUE CARTER DE POMPE BLEU |
| 12 | CM+9527045430 | KNIE ELBOW COUDE |

☐ =Assembly

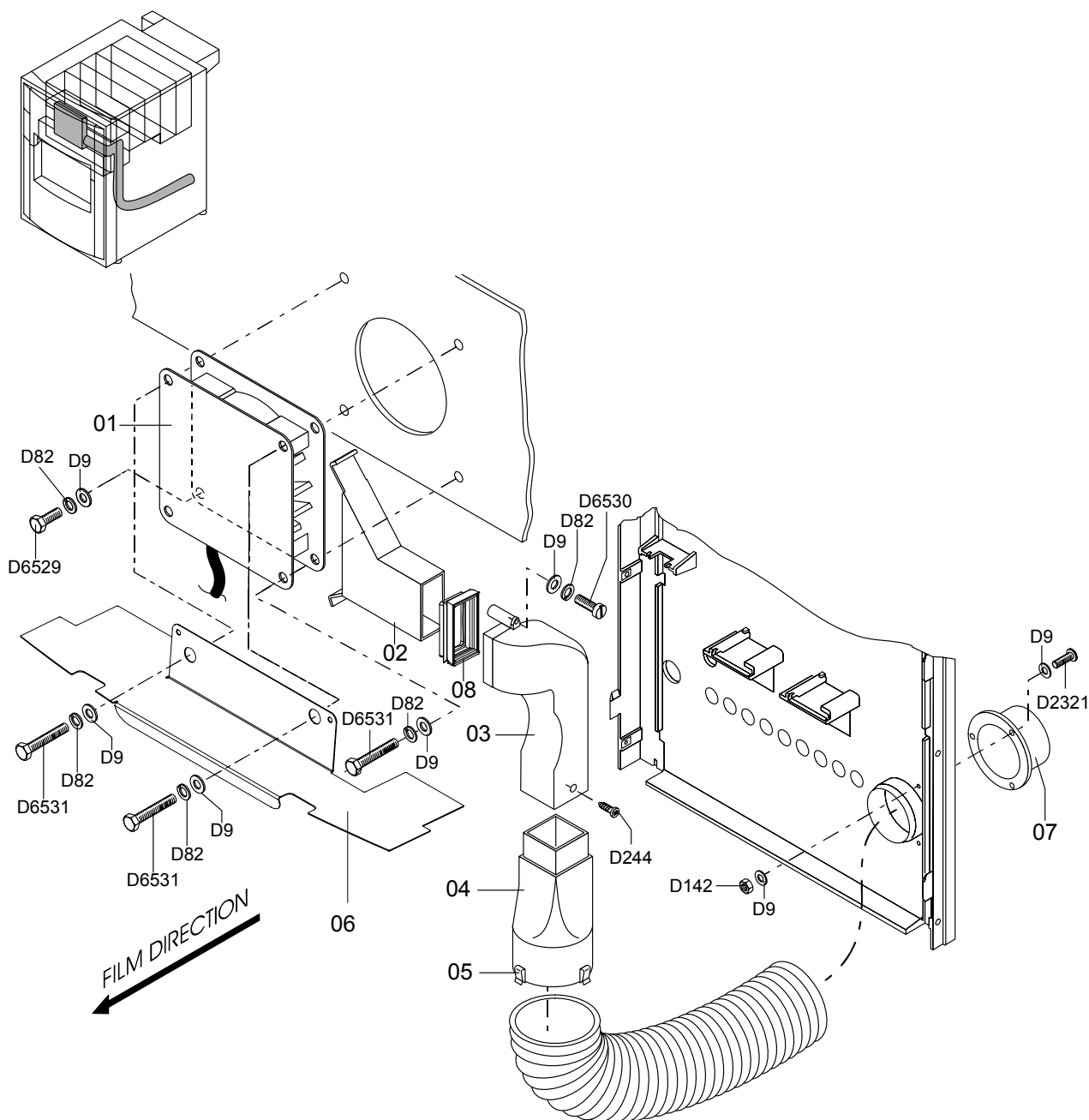
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

TANK HEATER, CIRCULATION PUMP

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8015.CDR



EXHAUST

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9043172270 | LÜFTER 24VDC FAN 24VDC VENTILATEUR 24VDC |
| 2 | CM+9527069570 | ABSAUGKANAL SUCTION CHANNEL CANAL D'ASPIRATION |
| 3 | CM+9527011741 | ABSAUGKRÜMMER EXTRACTION ELBOW COUDE D'ASPIRATION |
| 4 | CM+9527011760 | ÜBERGANGSSTÜCK FÜR ABLUFT ADAPTER FOR EXHAUST RACCORD DE RÉDUCTION POUR SORTIE D'AIR |
| 5 | CM+9510110080 | KABELKLAMMER CABLE CLAMP COLLIER DE SERRAGE |
| 6 | CM+9527069360 | * TROCKNER LUFTABDECKUNG DRYER AIR COVER SECHOIR AIR COUVRCLE |
| 7 | CM+9522030091 | ROHR PIPE TUBE |
| 8 | CM+9527069620 | KANALDICHTUNG CHANNEL SEAL CANAL JOINT |

☐ =Assembly

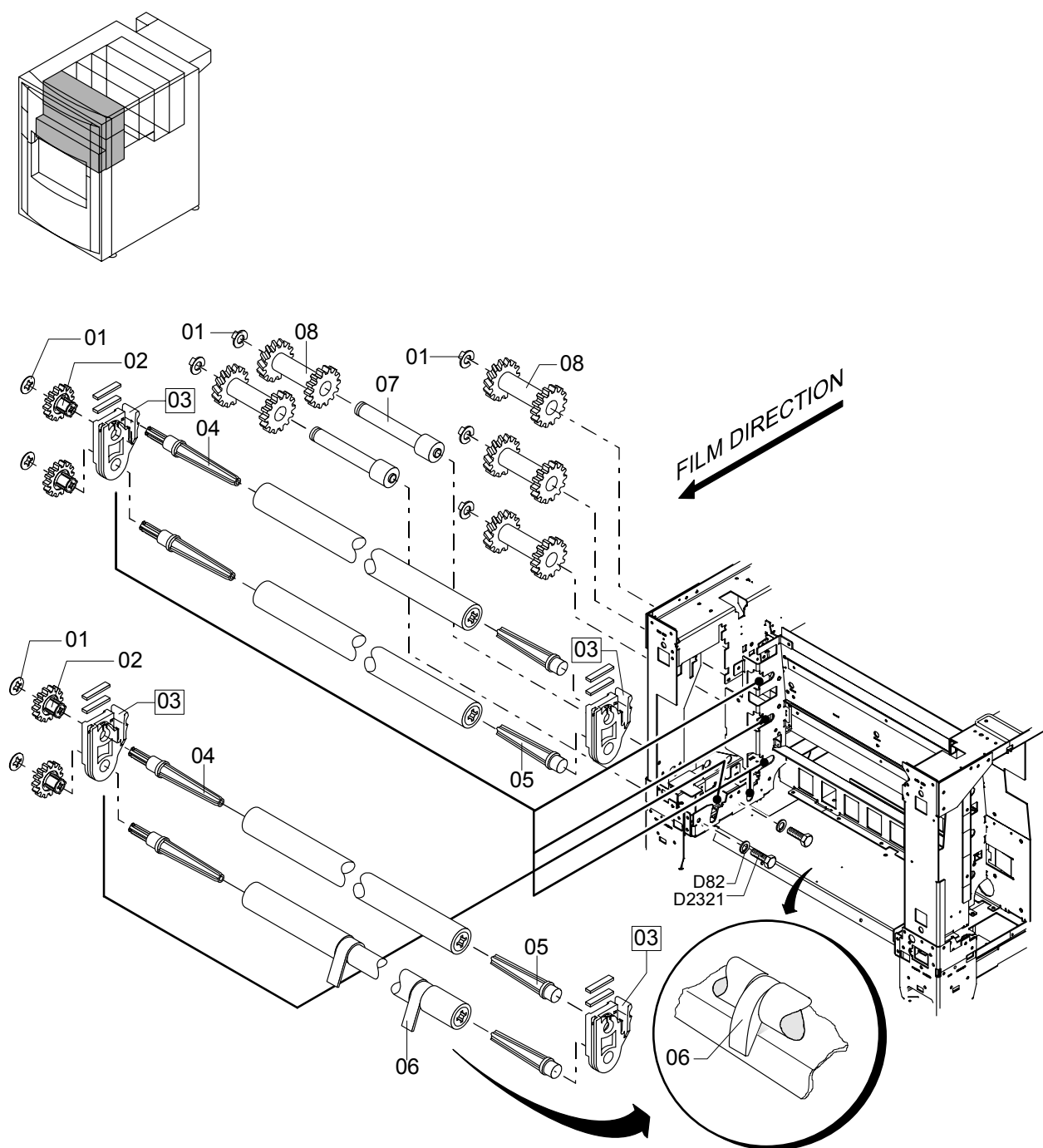
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

EXHAUST

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8016.CDR



DRYER DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 2 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| <input type="checkbox"/> 3 | CM+9527068300 | DOPPELLAGER DOUBLE BEARING PALIER DOUBLE |
| 4 | CM+9520051412 | BOLZEN BOLT BOULON |
| 5 | CM+9520051422 | BOLZEN BOLT BOULON |
| 6 | CM+9527011242 | ABWEISER TROCKNERAUSGANG DEFLECTOR DRYER EXIT DEFLECTEUR SORTIE SÉCHOIR |
| 7 | CM+9527069160 | LAGERBOLZEN MIT GEWINDE BEARING BOLT WITH THREAD BOULON DE PALIER AVEC FILET |
| 8 | CM+9521027362 | KOMBIRAD Z11/15 SCHWARZ COMBINATION WHEEL Z11/15 BLACK ROUE COMBINEE Z11/15 NOIR |

☐ =Assembly

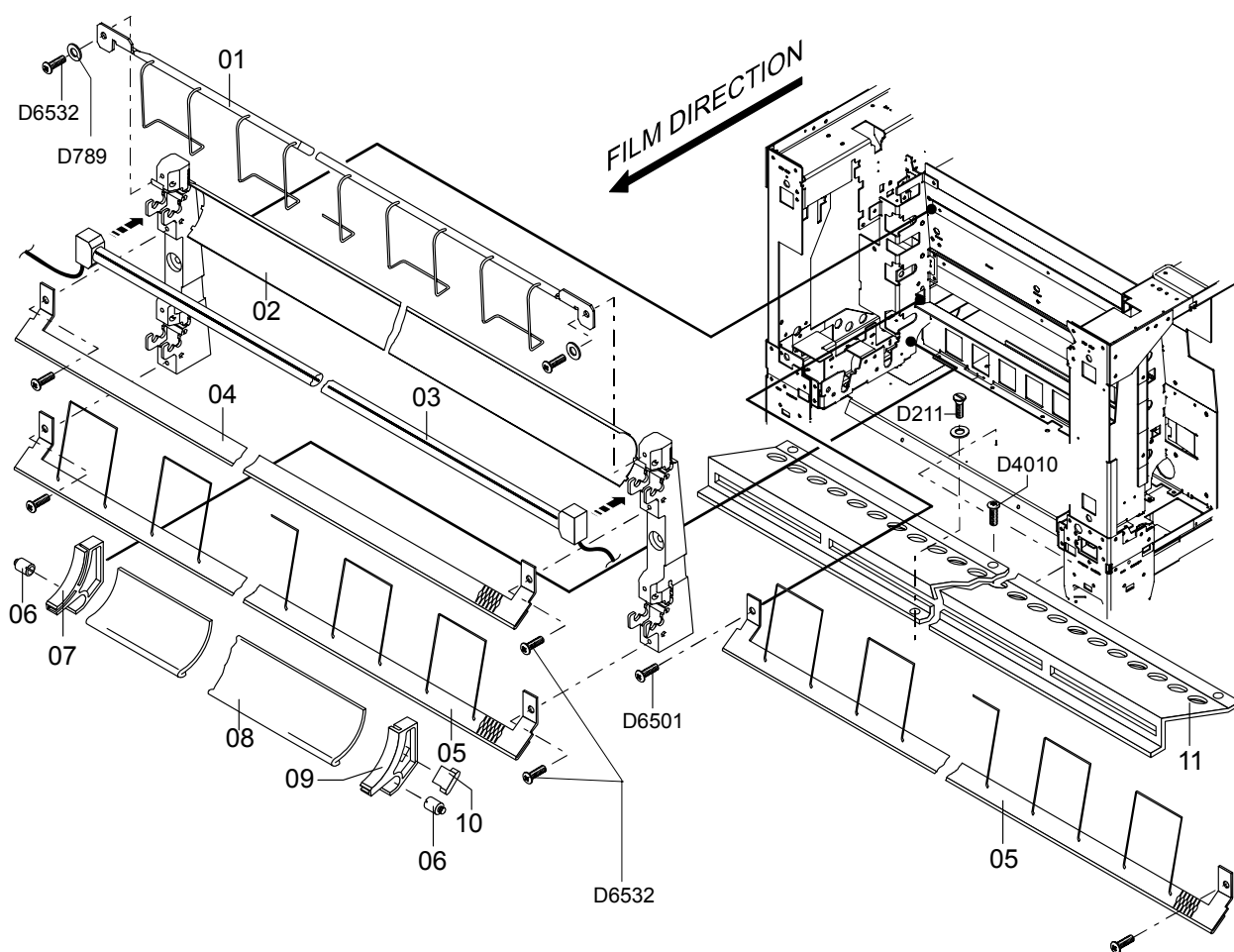
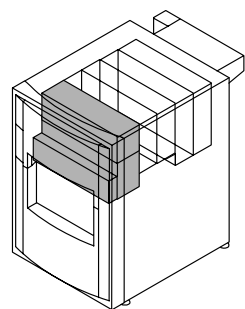
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRYER DRIVE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8017.CDR



DRYER

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9527066802 | DRAHTSCHUTZ WIRE PROTECTION PROTECTION DE CONDUCTEUR |
| 2 | CM+9522063042 | REFLEKTOR REFLECTOR REFLECTEUR |
| 3 | CM+9522063102 | STRAHLER (400W) RADIATOR (400W) RADIATEUR (400W) |
| 4 | CM+9527068172 | WINKEL BRACKET EQUERRE |
| 5 | CM+9527065802 | WINKEL MIT DRAHTSCHUTZ ANGLE WITH WIRE PROTECTION EQUERRE AVEC PROTECTION DE CONDUCTEUR |
| 6 | CM+9527069181 | BOLZEN BOLT BOULON |
| 7 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 8 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 9 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 10 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 11 | CM+9527067242 | FILMLEITBLECH UNTEN FILM GUIDE PLATE BOTTOM FILM PLAQUE DE GUIDAGE EN BAS |

☐ =Assembly

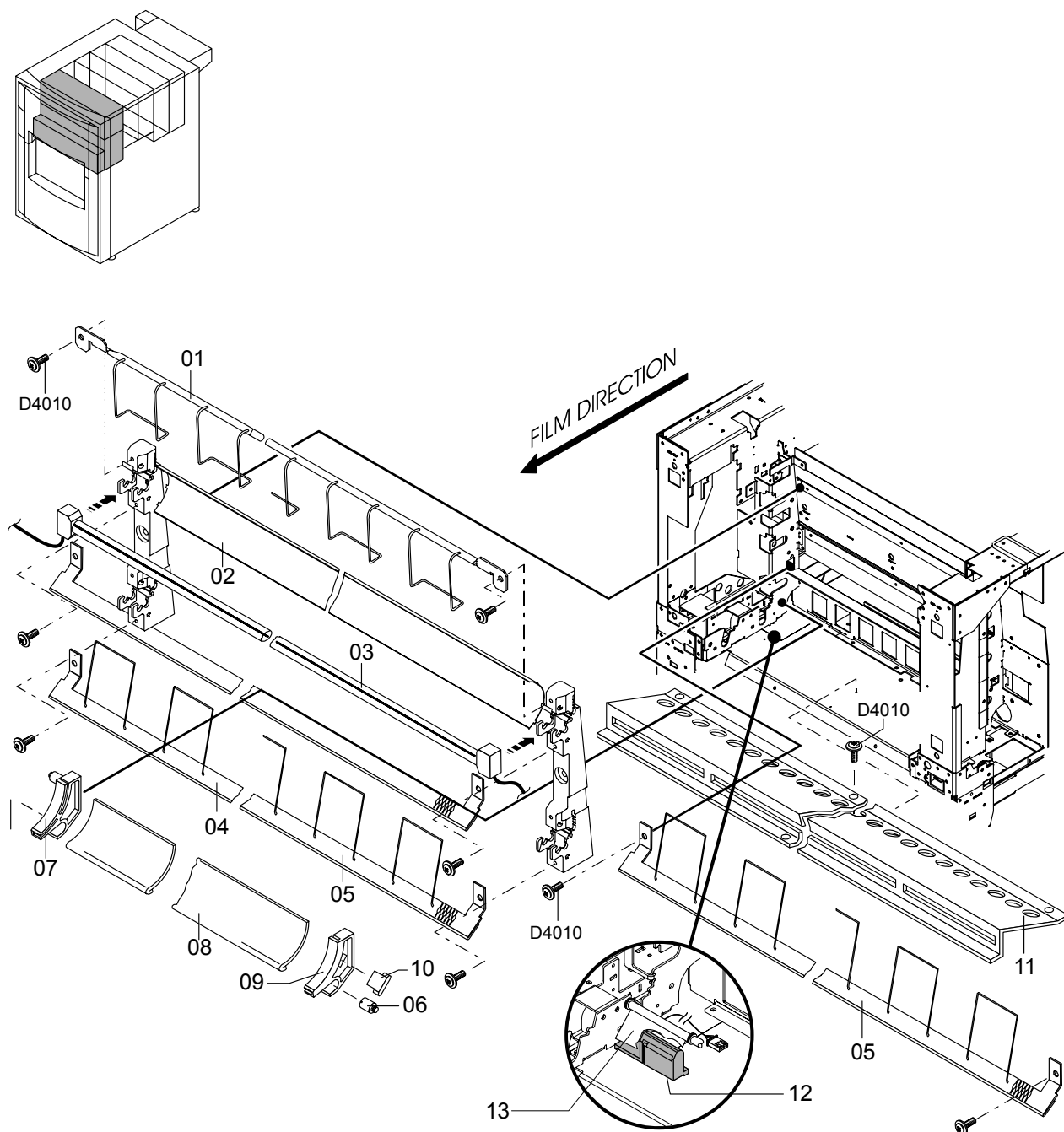
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRYER

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8018.CDR



DRYER

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9527066802 | DRAHTSCHUTZ WIRE PROTECTION PROTECTION DE CONDUCTEUR |
| 2 | CM+9522063042 | REFLEKTOR REFLECTOR REFLECTEUR |
| 3 | CM+9522063102 | STRAHLER (400W) RADIATOR (400W) RADIATEUR (400W) |
| 4 | CM+9527068172 | WINKEL BRACKET EQUERRE |
| 5 | CM+9527065802 | WINKEL MIT DRAHTSCHUTZ ANGLE WITH WIRE PROTECTION EQUERRE AVEC PROTECTION DE CONDUCTEUR |
| 6 | CM+9527069181 | BOLZEN BOLT BOULON |
| 7 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 8 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 9 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 10 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 11 | CM+9527067242 | FILMLEITBLECH UNTEN FILM GUIDE PLATE BOTTOM FILM PLAQUE DE GUIDAGE EN BAS |
| 12 | CM+9527012700 | HALTER REEDKONTAKT VOLLSTÄNDIG HOLDER REED CONTACT COMPLETE FIXATION CONTACT REED |
| 13 | CM+9527018400 | KLAPPE VOLLSTÄNDIG FLAP ASSY VOLET COMPL. |

☐ =Assembly

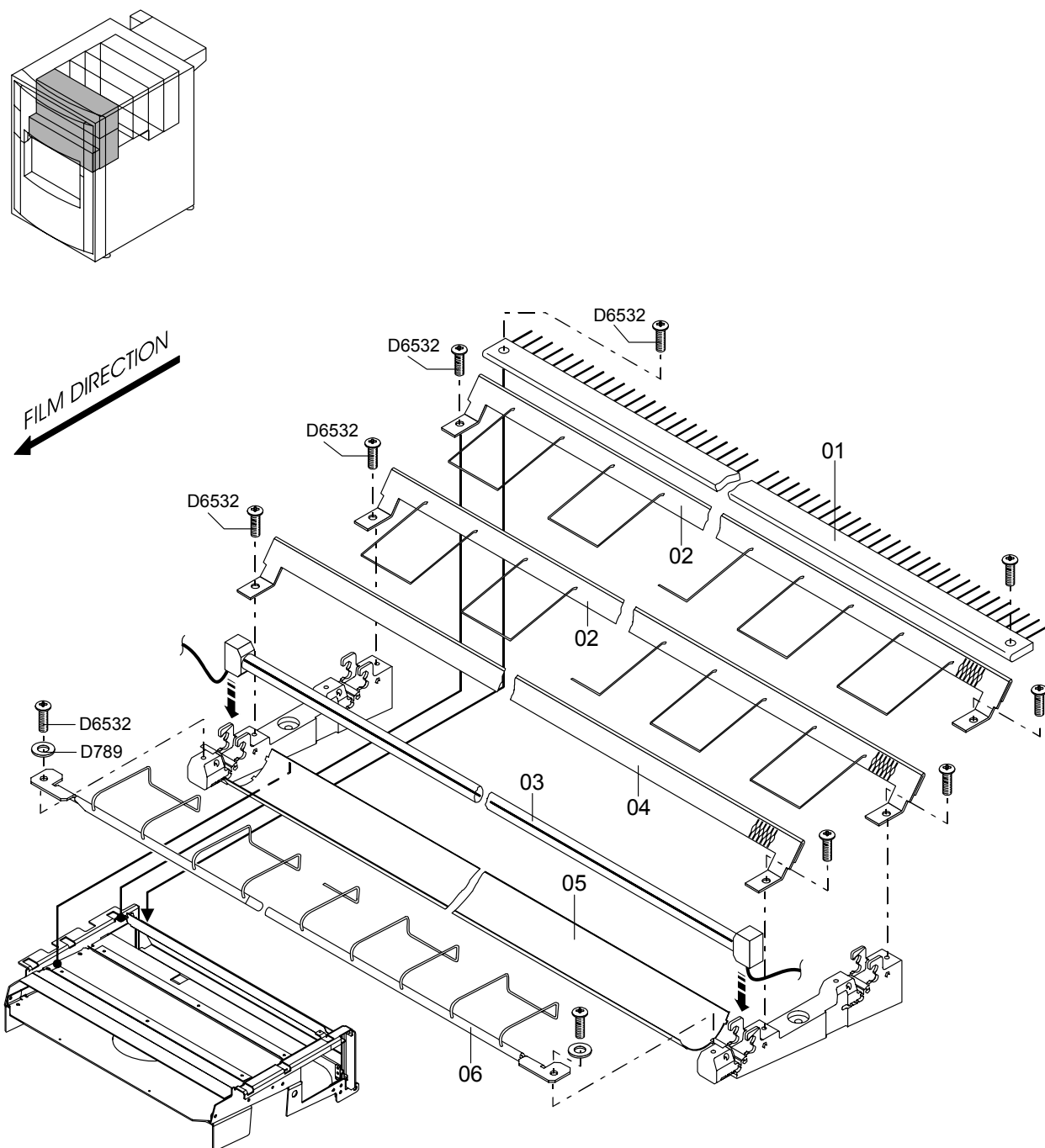
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRYER

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8019.CDR



DRYER FLAP

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9036260360 | BÜRSTE (STATISCHE ENTLADUNG) BRUSH (STATIC DISCHARGE) BROSSE (DECHARGE STATIQUE) |
| 2 | CM+9527065802 | WINKEL MIT DRAHTSCHUTZ ANGLE WITH WIRE PROTECTION EQUERRE AVEC PROTECTION DE CONDUCTEUR |
| 3 | CM+9522063102 | STRAHLER (400W) RADIATOR (400W) RADIATEUR (400W) |
| 4 | CM+9527068172 | WINKEL BRACKET EQUERRE |
| 5 | CM+9522063042 | REFLEKTOR REFLECTOR REFLECTEUR |
| 6 | CM+9527066802 | DRAHTSCHUTZ WIRE PROTECTION PROTECTION DE CONDUCTEUR |

☐ =Assembly

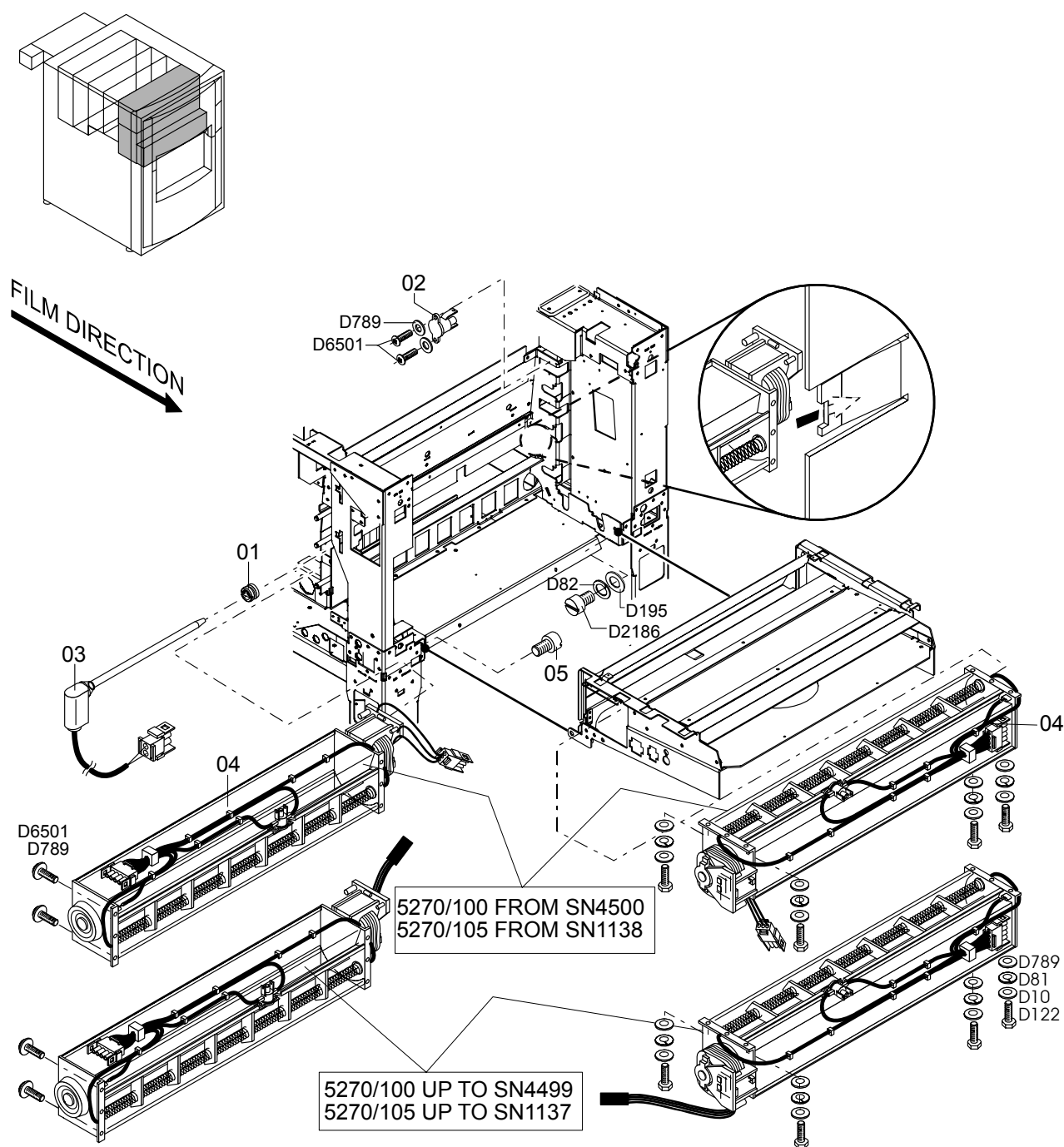
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRYER FLAP

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8020.CDR



DRYER FAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9037010040 | KABELDURCHFÜHRUNG GROMMET PASSE CABLE |
| 2 | CM+9042661950 | TEMPERATURSCHALTER 95°C TEMPERATURE LIMITER 95°C LIMITATEUR DE TEMPERATURE 95°C |
| 3 | CM+9042664090 | TEMPERATURFÜHLER TEMPERATURE FEELER PALPEUR DE TEMPERATURE |
| 4 | CM+9043172370 | QUERSTROMLÜFTER 24V - 5270/100 BIS FN4499; 5270/105 FN1137 CROSS-FLOW FAN 24V - 5270/100 UP TO SN4499; 5270/105 SN1137 VENTILATEUR TANG. 24V - 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |
| 4 | CM+9043172360 | QUERSTROMLÜFTER 230V - 5270/100 AB FN4500; 5270/105 FN1138 CROSS-FLOW FAN 230V - 5270/100 FROM SN4500; 5270/105 SN1138 VENTILATEUR TANG. 230V - 5270/100 A PARTIR DE NS4500; 5270/105 NS1138 |
| 5 | CM+9527069520 | SCHARNIERBOLZEN HINGE BOLT BOULON DE CHARNIERE |
| 6 | CM+9527071200 | VERBINDUNGSLEITUNG 24V LÜFTER - 5270/100 BIS FN4499; 5270/105 FN1137 CONNECTION CABLE FAN - 5270/100 UP TO SN4499; 5270/105 SN1137 LIGNE DE RACORDEMENT VENT. - 5270/100 JUSQU'AU NS4499; 5270/105 NS1137 |

☐ =Assembly

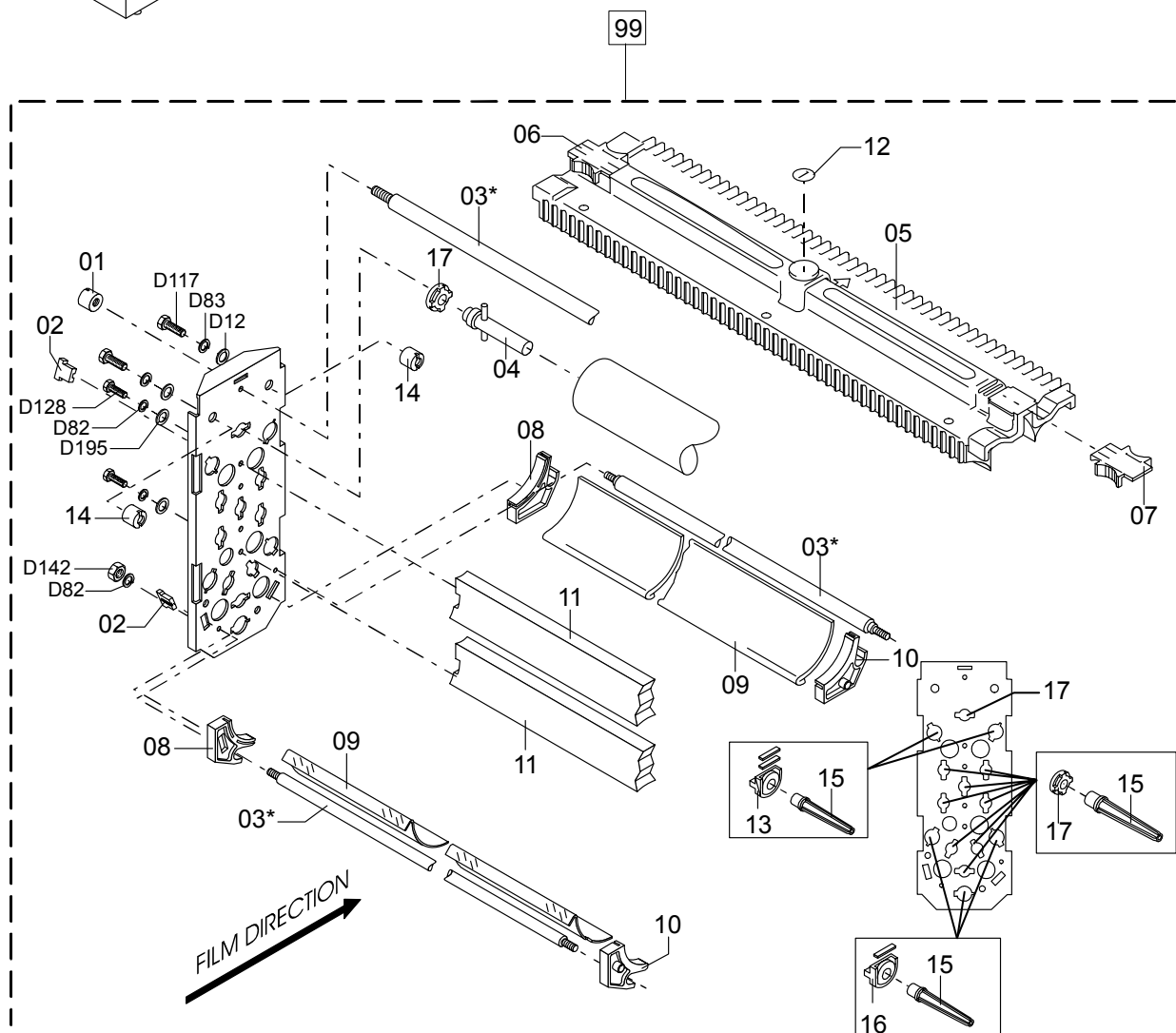
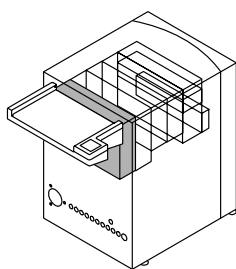
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DRYER FAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8021.CDR



DEVELOPER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9521081040 | BOLZEN BOLT BOULON |
| 2 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 3 | CM+9520051141 | * ZUGANKER TIE ROD TIRANT D'ANCRAGE |
| 4 | CM+9520052700 | BOLZEN BOLT BOULON |
| 5 | CM+9521081070 | LEITELEMENT-E GUIDE ELEMENT-E TRACEUR-E |
| 6 | CM+9521081050 | SCHIEBER SLIDE GLISSIERE |
| 7 | CM+9520054021 | SCHIEBER SLIDE GLISSIERE |
| 8 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 9 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 10 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 11 | CM+9520051165 | LEITELEMENT MITTE GUIDE ELEMENT MIDDLE ELEMENT GUIDE AU MILIEU |
| 12 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |
| 13 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| 14 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |
| 15 | CM+9520051422 | BOLZEN BOLT BOULON |
| 16 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 17 | CM+9520051190 | LAGER BEARING PALIER |
| 99 | CM+9527081004 | ENTWICKLERRACK DEVELOPER RACK RACK DU REVELATEUR |

□=Assembly

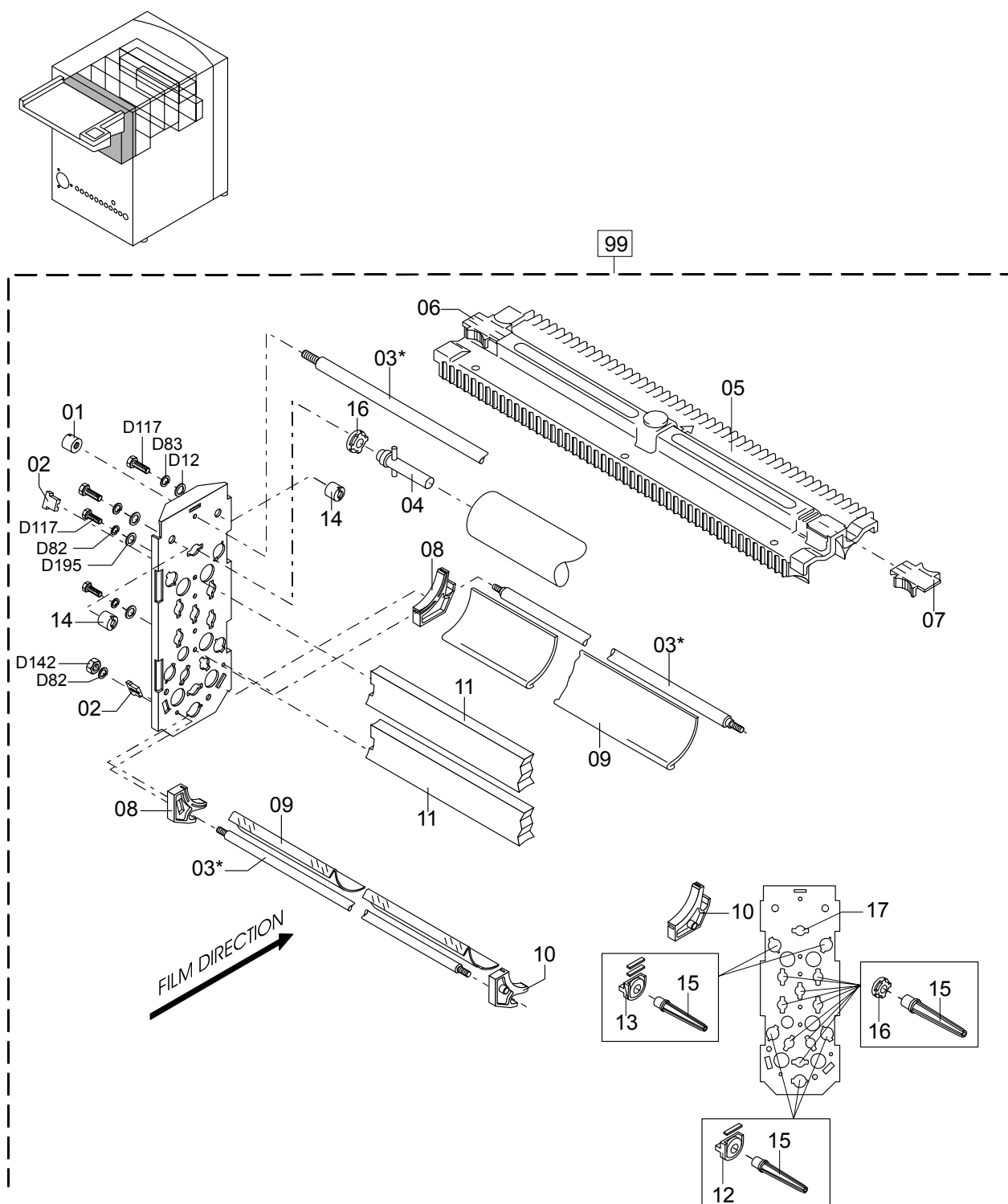
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8022.CDR

DEVELOPER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9521081040 | BOLZEN BOLT BOULON |
| 2 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 3 | CM+9520051141 | * ZUGANKER TIE ROD TIRANT D'ANCRAGE |
| 4 | CM+9520052700 | BOLZEN BOLT BOULON |
| 5 | CM+9521081070 | LEITELEMENT-E GUIDE ELEMENT-E TRACEUR-E |
| 6 | CM+9521081050 | SCHIEBER SLIDE GLISSIERE |
| 7 | CM+9520054021 | SCHIEBER SLIDE GLISSIERE |
| 8 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 9 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 10 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 11 | CM+9520051165 | LEITELEMENT MITTE GUIDE ELEMENT MIDDLE ELEMENT GUIDE AU MILIEU |
| 12 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 13 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| 14 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |
| 15 | CM+9520051422 | BOLZEN BOLT BOULON |
| 16 | CM+9520051190 | LAGER BEARING PALIER |
| 99 | CM+9527081400 | ENTWICKLERRACK ENTWICKLERRACK DEVELOPER RACK DEVELOPER RACK RACK REVELATEUR RACK REVELATEUR |

□=Assembly

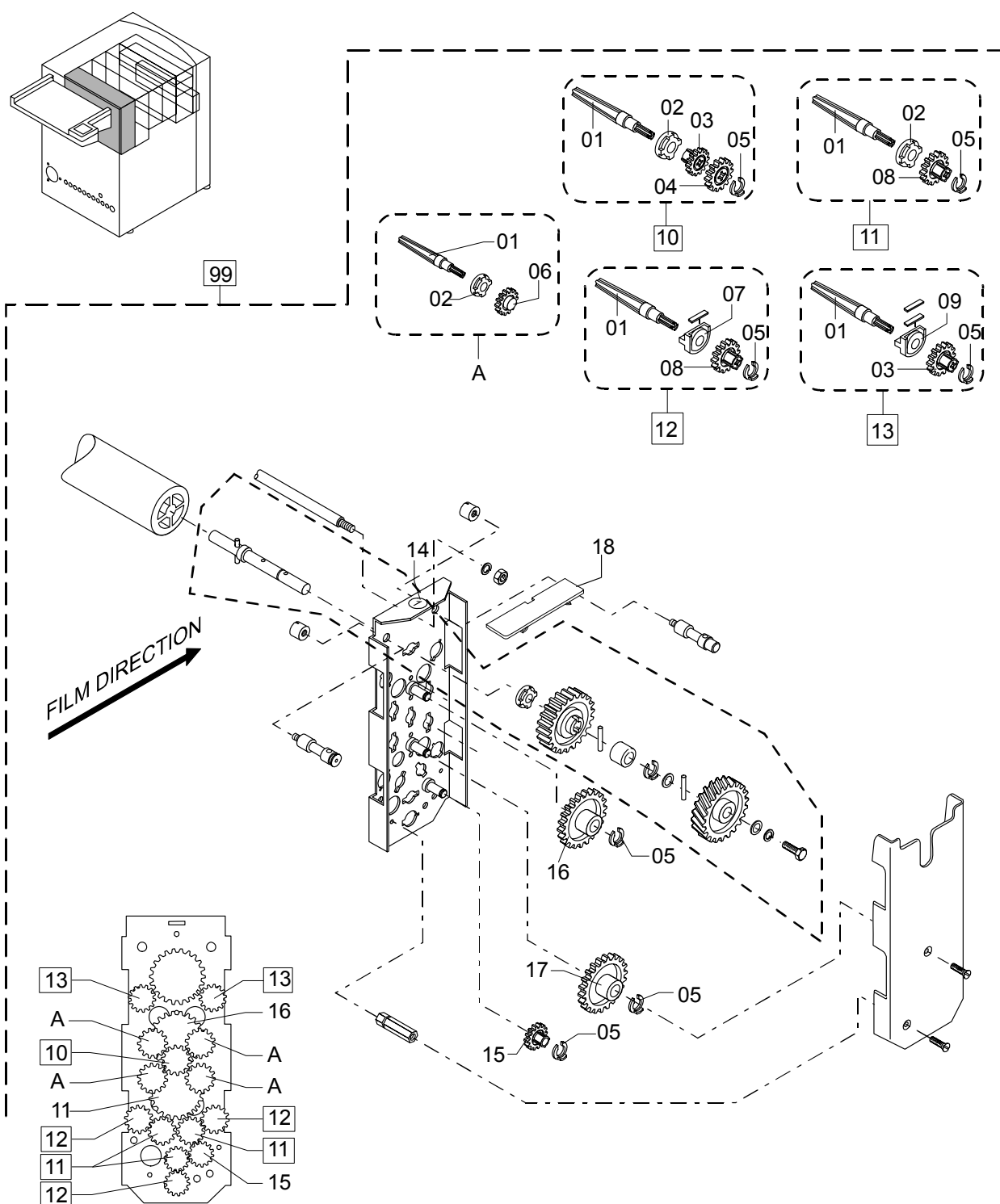
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8023a.CDR



DEVELOPER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. | Teile-Nr. Part No. | Benennung Description Denomination |
|----------------------|-----------------------|--|
| Pos. no. | Nr. de Ref. | |
| 1 | CM+9520051412 | BOLZEN BOLT BOULON |
| 2 | CM+9520051190 | LAGER BEARING PALIER |
| 3 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| 4 | CM+9520051360 | ZAHNRAD Z=18 / SCHWARZ GEAR WHEEL T=18 / BLACK ROUE DENTEE D=18 / NOIR |
| 5 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 6 | CM+9520051370 | ZAHNRAD Z=18 / SCHWARZ GEAR WHEEL T=18 / BLACK ROUE DENTEE D=18 / NOIR |
| 7 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 8 | CM+9521081320 | ZAHNRAD M=1,5 / Z=15 / GRAU GEAR M=1,5 / T=15 / GRAY ROUE DENTEE M=1,5 / D=15 / GRIS |
| 9 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| 10 | CM+9520052502 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 11 | CM+9521081400 | BOLZEN BOLT BOULON |
| 12 | CM+9521081300 | BOLZEN BOLT BOULON |
| 13 | CM+9522056601 | BOLZEN BOLT BOULON |
| 14 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |
| 15 | CM+9520051380 | ZAHNRAD M=1,5 / Z=15 / SCHWARZ GEAR M=1,5 / T=15 / BLACK ROUE DENTEE M=1,5 / D=15 / NOIR |
| 16 | CM+9520051330 | ZAHNRAD M=1,5 / Z=24 / SCHWARZ GEAR M=1,5 / T=24 / BLACK ROUE DENTEE M=1,5 / D=24 / NOIR |
| 17 | CM+9520051340 | ZAHNRAD Z=28 / SCHWARZ GEAR WHEEL T=28 / BLACK ROUE DENTEE D=28 / NOIR |
| 18 | CM+9527081211 | RACKABDECKUNG COVER RACK RECOUVREMENT RACK |

□=Assembly

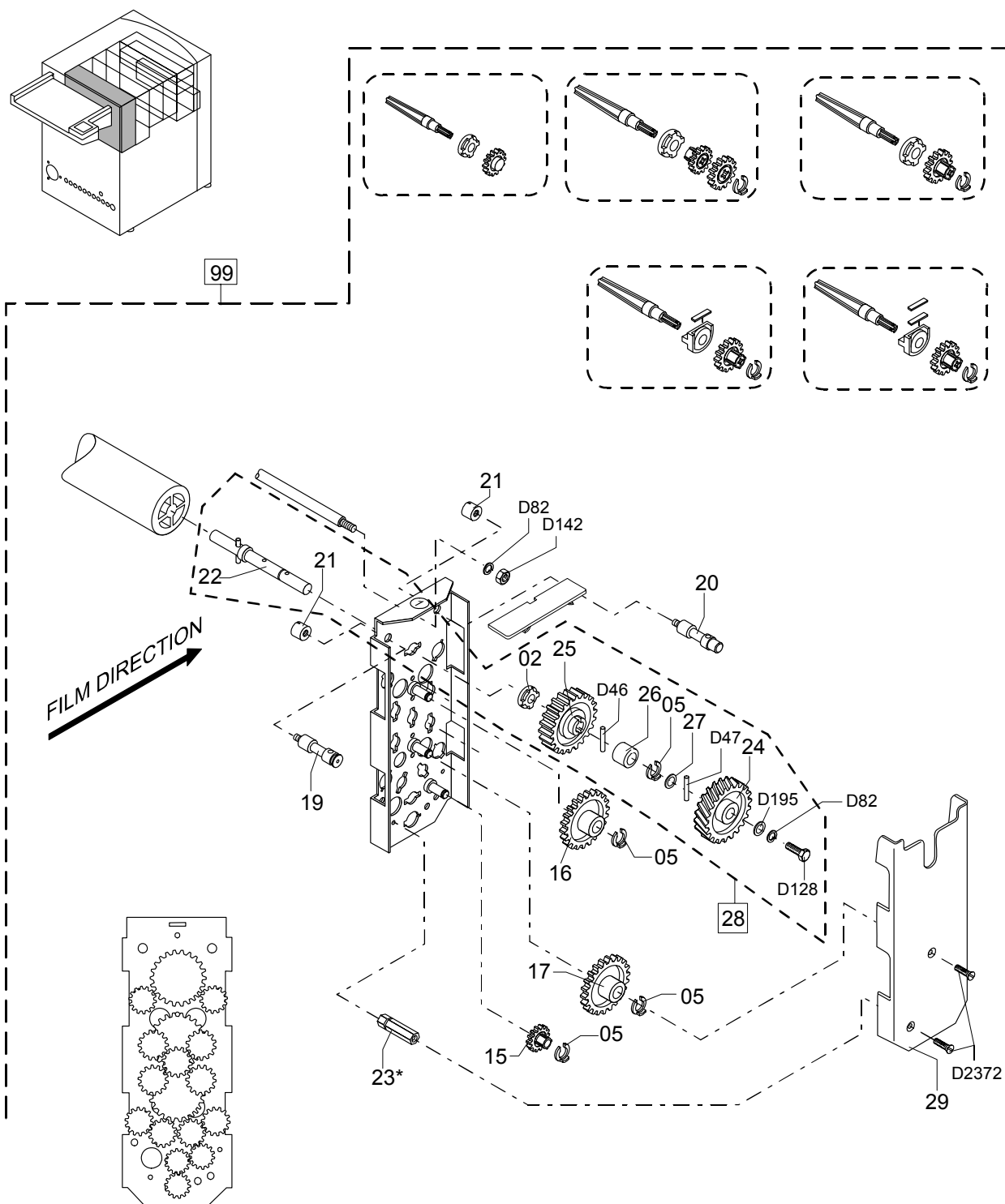
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8023b.CDR



DEVELOPER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 19 | CM+9520051030 | BOLZEN BOLT BOULON |
| 20 | CM+9520051041 | BOLZEN BOLT BOULON |
| 21 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |
| 22 | CM+9520052800 | BOLZEN BOLT BOULON |
| 23 | CM+9521281110 | * BOLZEN BOLT BOULON |
| 24 | CM+9520051311 | SCHRÄGSTIRNRAD M=2 / Z=24 / SCHWARZ HELICAL SPUR GEAR M=2 / T=24 / BLACK ROUE HELICOIDALE M=2 / D=24 / NOIR |
| 25 | CM+9520051350 | ZAHNRAD M=1,5 / Z=32 / SCHWARZ GEAR M=1,5 / T=32 / BLACK ROUE DENTEE M=1,5 / D=32 / NOIR |
| 26 | CM+9520051460 | BUCHSE BUSHING DOUILLE |
| 27 | CM+9815762250 | SCHEIBE WASHER RONDELLE |
| 28 | CM+9520052403 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 29 | CM+9520051492 | DECKEL COVER COUVERCLE |
| 99 | CM+9527081004 | ENTWICKLERRACK DEVELOPER RACK RACK DU REVELATEUR |

□=Assembly

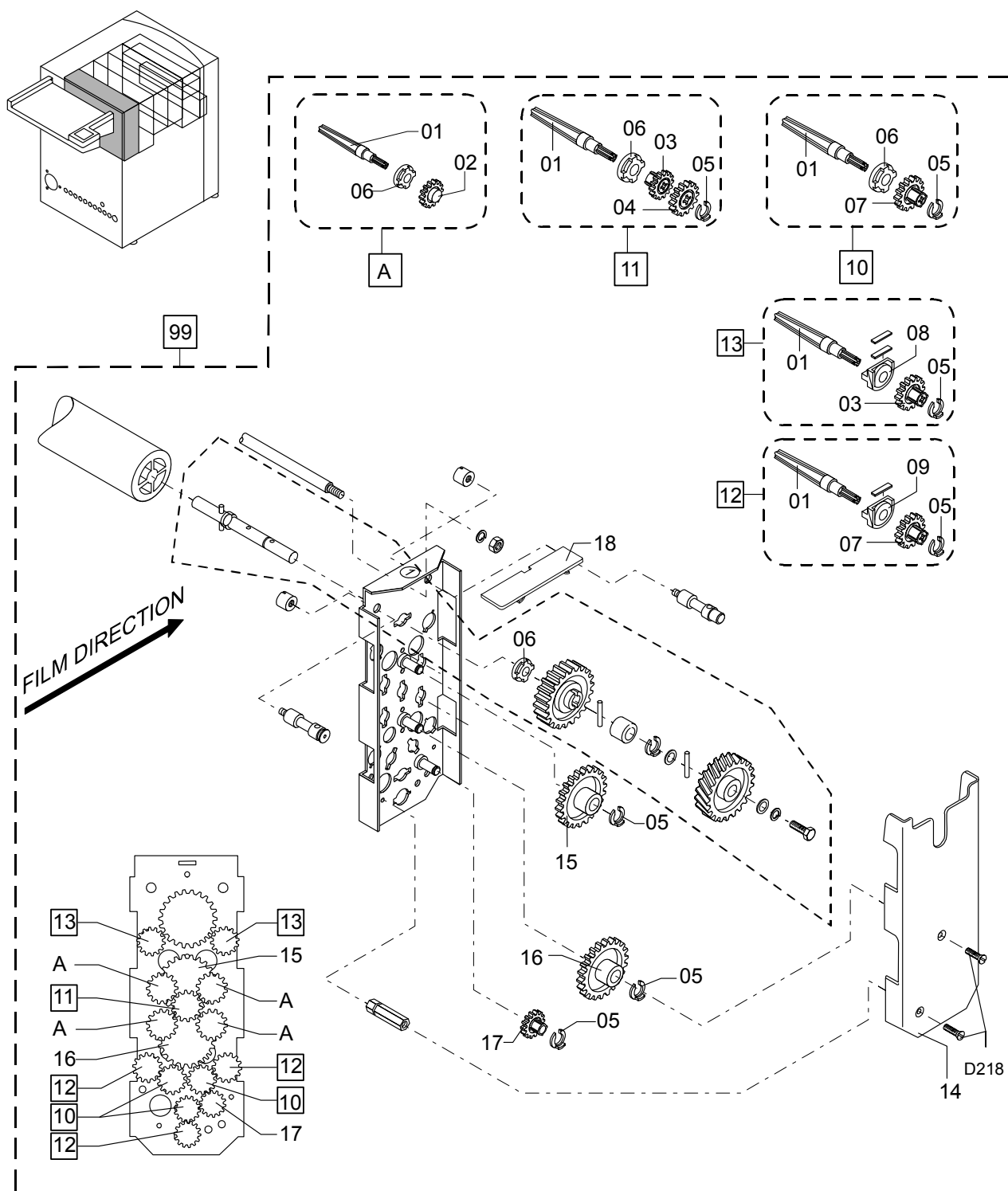
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8024a.CDR



DEVELOPER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9520051412 | BOLZEN BOLT BOULON |
| 2 | CM+9520051370 | ZAHNRAD Z=18 / SCHWARZ GEAR WHEEL T=18 / BLACK ROUE DENTEE D=18 / NOIR |
| 3 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| 4 | CM+9520051360 | ZAHNRAD Z=18 / SCHWARZ GEAR WHEEL T=18 / BLACK ROUE DENTEE D=18 / NOIR |
| 5 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 6 | CM+9520051190 | LAGER BEARING PALIER |
| 7 | CM+9521081320 | ZAHNRAD M=1,5 / Z=15 / GRAU GEAR M=1,5 / T=15 / GRAY ROUE DENTEE M=1,5 / D=15 / GRIS |
| 8 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| 9 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 10 | CM+9521081400 | BOLZEN BOLT BOULON |
| 11 | CM+9520052502 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 12 | CM+9521081300 | BOLZEN BOLT BOULON |
| 13 | CM+9522056601 | BOLZEN BOLT BOULON |
| 14 | CM+9520051492 | DECKEL COVER COUVERCLE |
| 15 | CM+9520051330 | ZAHNRAD M=1,5 / Z=24 / SCHWARZ GEAR M=1,5 / T=24 / BLACK ROUE DENTEE M=1,5 / D=24 / NOIR |
| 16 | CM+9520051340 | ZAHNRAD Z=28 / SCHWARZ GEAR WHEEL T=28 / BLACK ROUE DENTEE D=28 / NOIR |
| 17 | CM+9520051380 | ZAHNRAD M=1,5 / Z=15 / SCHWARZ GEAR M=1,5 / T=15 / BLACK ROUE DENTEE M=1,5 / D=15 / NOIR |
| 18 | CM+9527081211 | RACKABDECKUNG COVER RACK RECOUVREMENT RACK |

□=Assembly

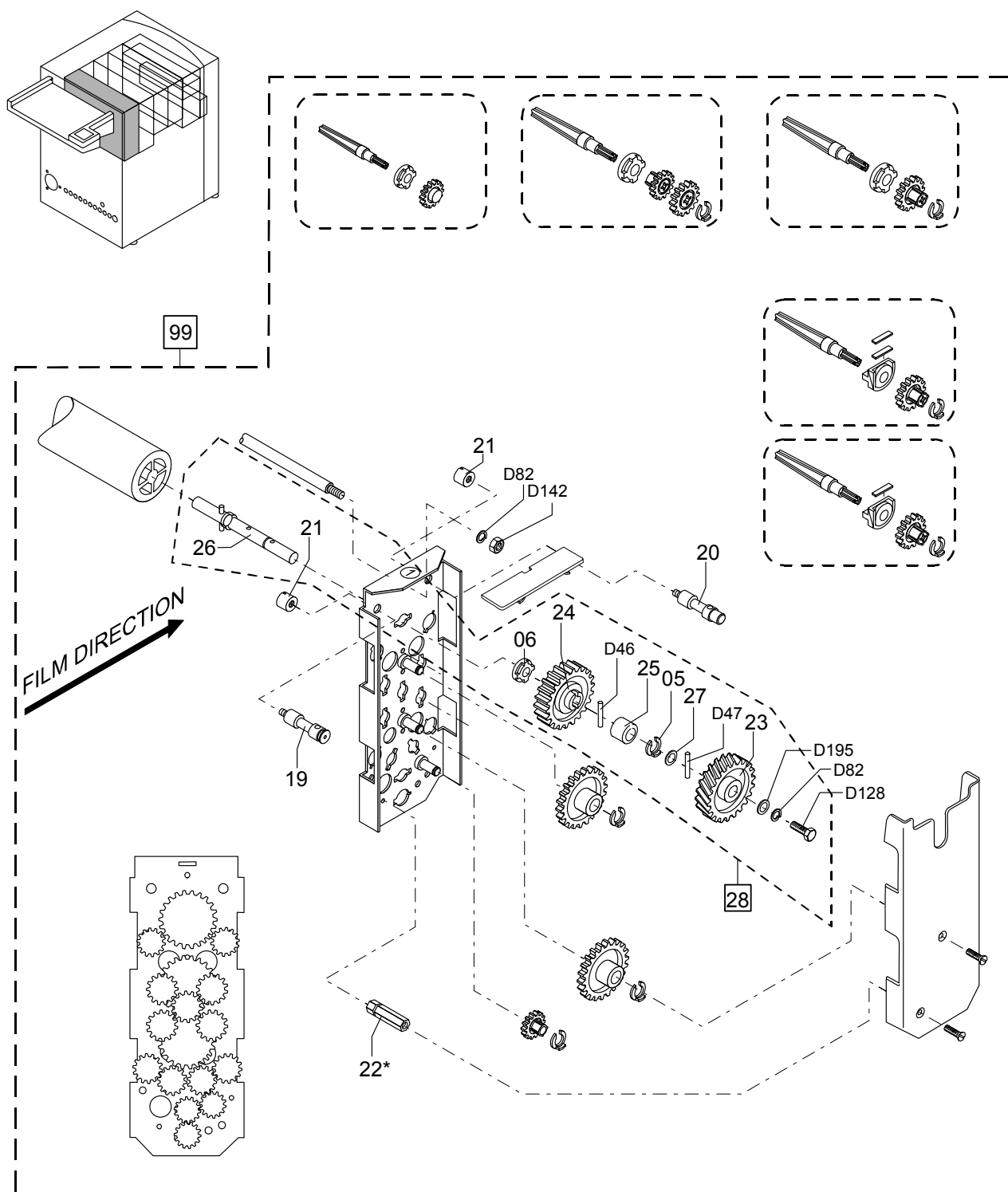
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8024b.CDR



DEVELOPER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 19 | CM+9520051030 | BOLZEN BOLT BOULON |
| 20 | CM+9520051041 | BOLZEN BOLT BOULON |
| 21 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |
| 22 | CM+9521281110 | * BOLZEN BOLT BOULON |
| 23 | CM+9520051311 | SCHRÄGSTIRNRAD M=2 / Z=24 / SCHWARZ HELICAL SPUR GEAR M=2 / T=24 / BLACK ROUE HELICOIDALE M=2 / D=24 / NOIR |
| 24 | CM+9520051350 | ZAHNRAD M=1,5 / Z=32 / SCHWARZ GEAR M=1,5 / T=32 / BLACK ROUE DENTEE M=1,5 / D=32 / NOIR |
| 25 | CM+9520051460 | BUCHSE BUSHING DOUILLE |
| 26 | CM+9520052800 | BOLZEN BOLT BOULON |
| 27 | CM+9815762250 | SCHEIBE WASHER RONDELLE |
| 28 | CM+9520052403 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 99 | CM+9527081400 | ENTWICKLERRACK DEVELOPER RACK RACK REVELATEUR |

□=Assembly

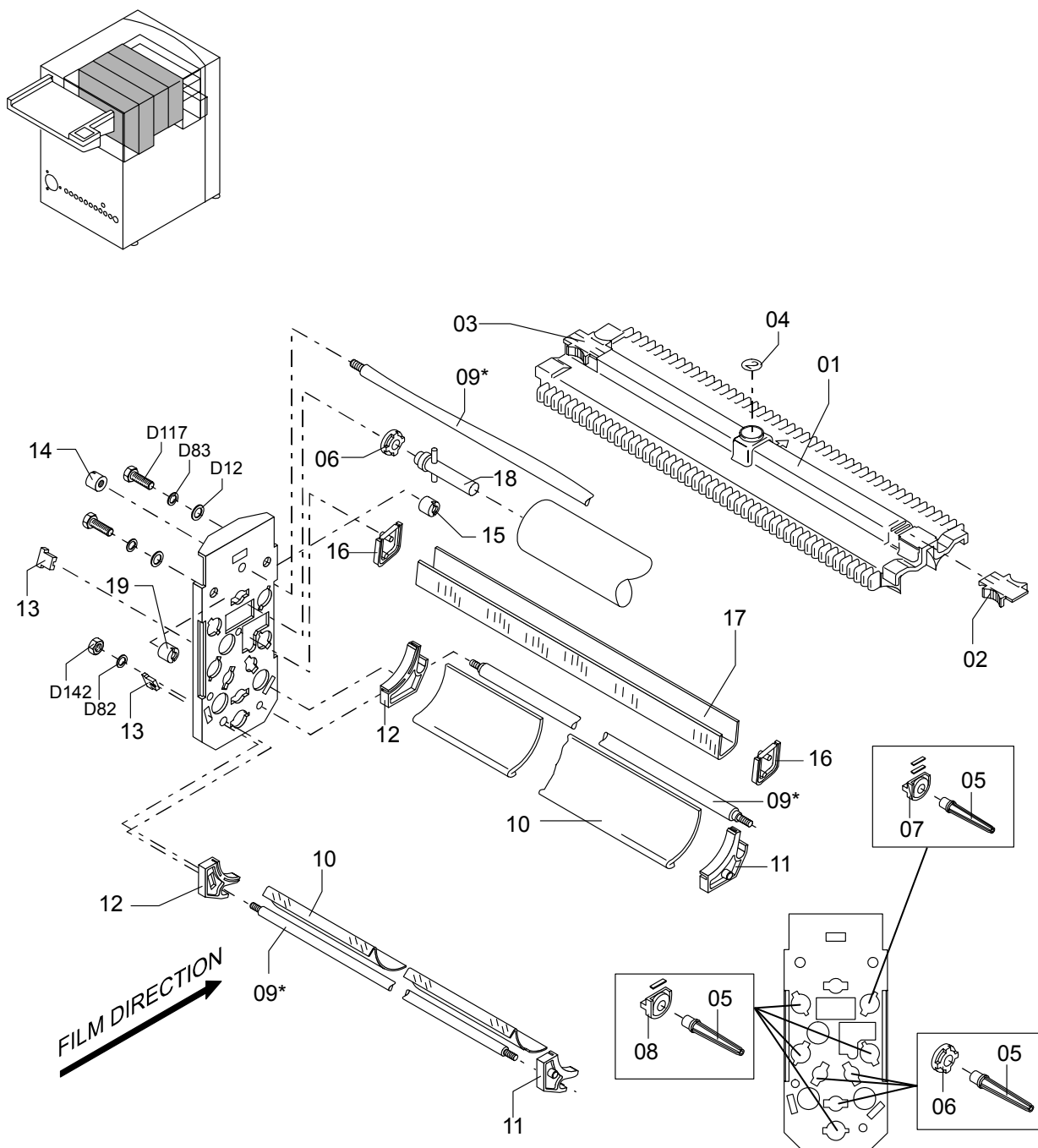
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DEVELOPER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8025.CDR



FIXING RACK 1/2 / WATER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9520055012 | LEITELEMENT GUIDE ELEMENT ELEMENT GUIDE |
| 2 | CM+9520054021 | SCHIEBER SLIDE GLISSIERE |
| 3 | CM+9521081050 | SCHIEBER SLIDE GLISSIERE |
| 4 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |
| 5 | CM+9520051422 | BOLZEN BOLT BOULON |
| 6 | CM+9520051190 | LAGER BEARING PALIER |
| 7 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| 8 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 9 | CM+9520051141 | * ZUGANKER TIE ROD TIRANT D'ANCORAGE |
| 10 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 11 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 12 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 13 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 14 | CM+9521081040 | BOLZEN BOLT BOULON |
| 15 | CM+9520051051 | BOLZEN (Ø 12MM) BOLT (Ø 12MM) BOULON (Ø 12MM) |
| 16 | CM+9522056030 | KLOTZ BLOCK BLOC |
| 17 | CM+9522056041 | LEITELEMENT GUIDE ELEMENT ELEMENT GUIDE |
| 18 | CM+9520052700 | BOLZEN BOLT BOULON |
| 19 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |

□=Assembly

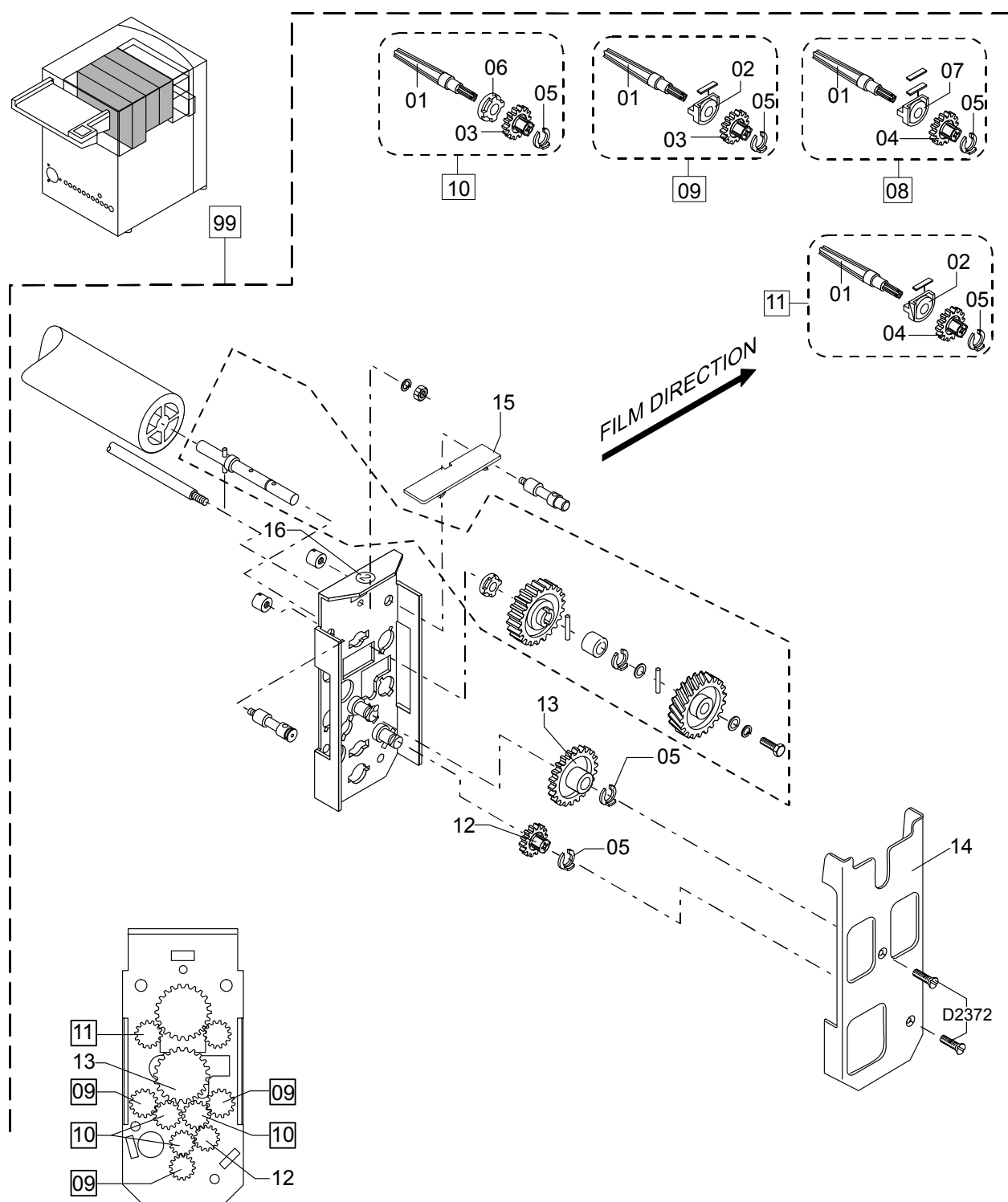
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

FIXING RACK 1/2 / WATER RACK

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8026a.CDR



FIXING RACK 1/2 / WATER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9520051412 | BOLZEN BOLT BOULON |
| 2 | CM+9520052600 | LAGER 1-FACH ANGEFEDERT BEARING SINGLE SPRING LOADED PALIER SUSPENSION SIMPLE |
| 3 | CM+9521081320 | ZAHNRAD M=1,5 / Z=15 / GRAU GEAR M=1,5 / T=15 / GRAY ROUE DENTEE M=1,5 / D=15 / GRIS |
| 4 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| 5 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 6 | CM+9520051190 | LAGER BEARING PALIER |
| 7 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| <input type="checkbox"/> 8 | CM+9522056601 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 9 | CM+9521081300 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 10 | CM+9521081400 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 11 | CM+9520052202 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 12 | CM+9520051380 | ZAHNRAD M=1,5 / Z=15 / SCHWARZ GEAR M=1,5 / T=15 / BLACK ROUE DENTEE M=1,5 / D=15 / NOIR |
| 13 | CM+9520051330 | ZAHNRAD M=1,5 / Z=24 / SCHWARZ GEAR M=1,5 / T=24 / BLACK ROUE DENTEE M=1,5 / D=24 / NOIR |
| 14 | CM+9522056021 | DECKEL COVER COUVERCLE |
| 15 | CM+9527081211 | RACKABDECKUNG COVER RACK RECOUVREMENT RACK |
| 16 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |

☐ =Assembly

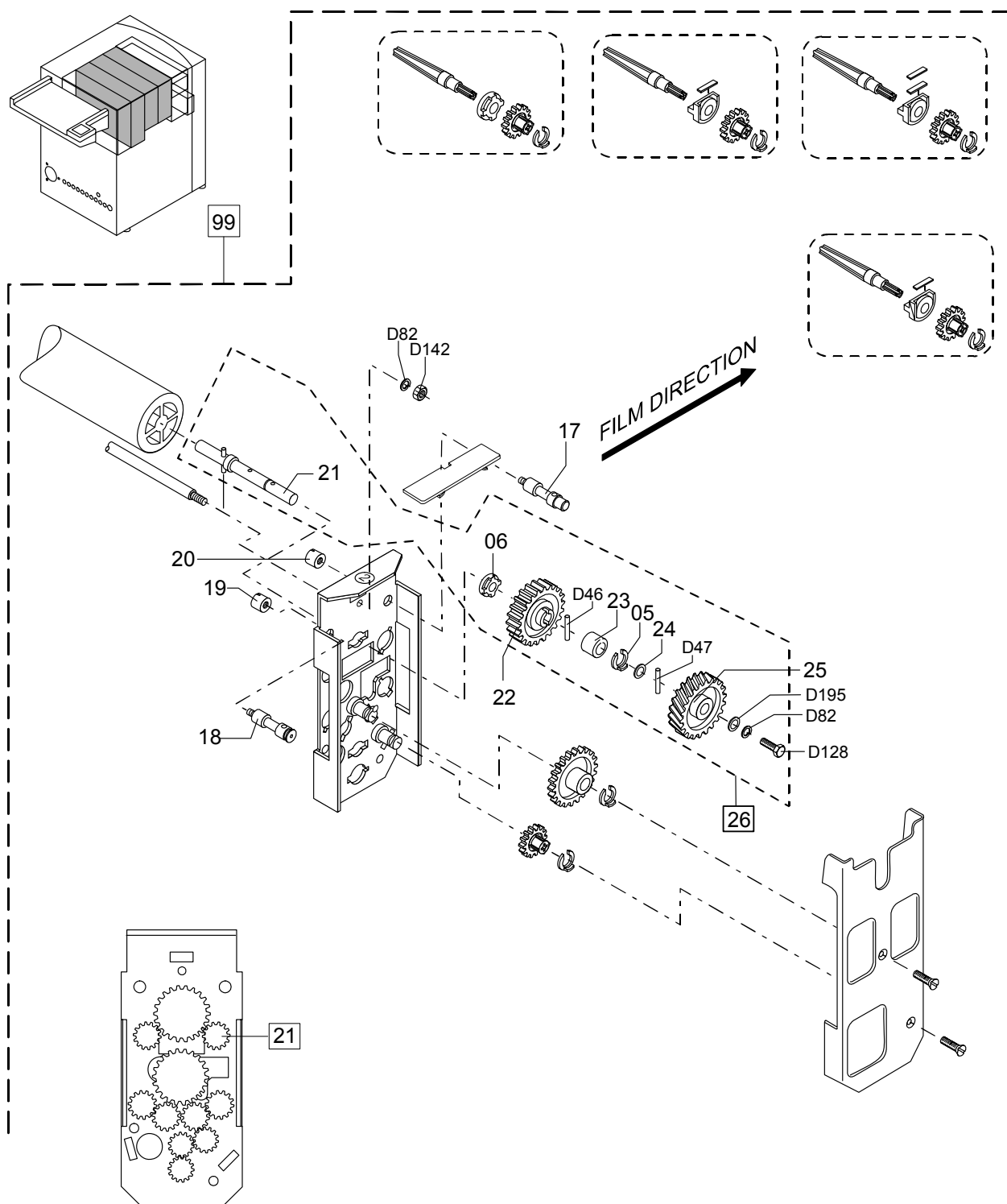
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

FIXING RACK 1/2 / WATER RACK DRIVE (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8026b.CDR



FIXING RACK 1/2 / WATER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 17 | CM+9520051030 | BOLZEN BOLT BOULON |
| 18 | CM+9520051041 | BOLZEN BOLT BOULON |
| 19 | CM+9520055020 | BOLZEN (Ø 13MM) BOLT (Ø 13MM) BOULON (Ø 13MM) |
| 20 | CM+9520051051 | BOLZEN (Ø 12MM) BOLT (Ø 12MM) BOULON (Ø 12MM) |
| 21 | CM+9520052800 | BOLZEN BOLT BOULON |
| 22 | CM+9520051350 | ZAHNRAD M=1,5 / Z=32 / SCHWARZ GEAR M=1,5 / T=32 / BLACK ROUE DENTEE M=1,5 / D=32 / NOIR |
| 23 | CM+9520051460 | BUCHSE BUSHING DOUILLE |
| 24 | CM+9815762250 | SCHEIBE WASHER RONDELLE |
| 25 | CM+9520051311 | SCHRÄGSTIRNRAD M=2 / Z=24 / SCHWARZ HELICAL SPUR GEAR M=2 / T=24 / BLACK ROUE HELICOIDALE M=2 / D=24 / NOIR |
| 26 | CM+9520052403 | BOLZEN VOLLSTÄNDIG BOLT COMPLETE BOULON COMPLET |
| 99 | CM+9527082004 | FIXIERRACK 1/2, WASSERRACK FIXER RACK 1/2, WATERRACK RACK FIXATEUR 1/2, RACK D'EAU |

□=Assembly

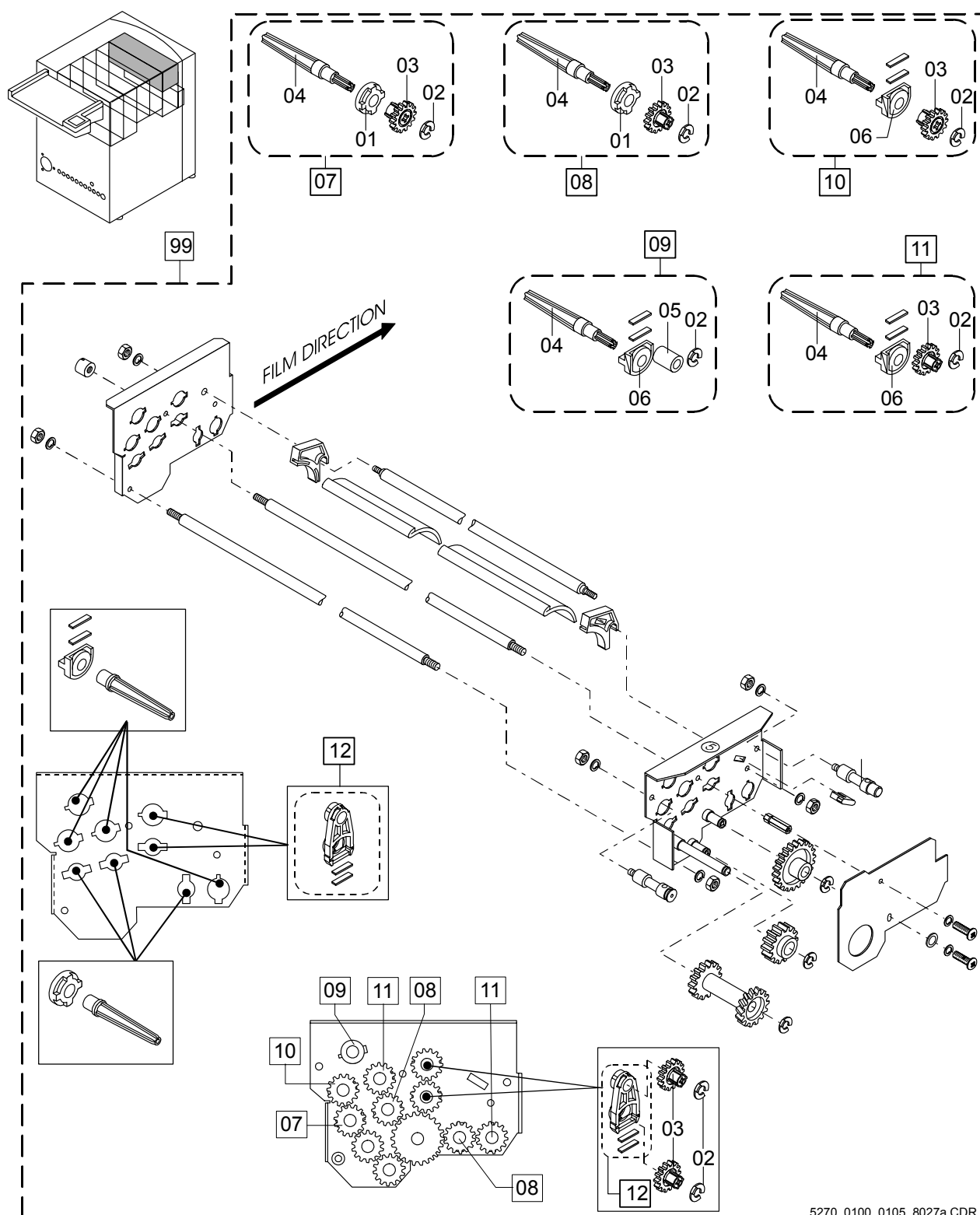
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

FIXING RACK 1/2 / WATER RACK DRIVE (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8027a.CDR



DISTRIBUTOR UNIT (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9520051190 | LAGER BEARING PALIER |
| 2 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 3 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| 4 | CM+9520051412 | BOLZEN BOLT BOULON |
| 5 | CM+9839180370 | BUCHSE BUSHING DOUILLE |
| 6 | CM+9522061700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |
| <input type="checkbox"/> 7 | CM+9522061901 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 8 | CM+9522061401 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 9 | CM+9521084200 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 10 | CM+9522061801 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 11 | CM+9522061301 | BOLZEN BOLT BOULON |
| <input type="checkbox"/> 12 | CM+9521283602 | DOPPELLAGER 2-FACH GEFEDERT DOUBLE BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |

☐ =Assembly

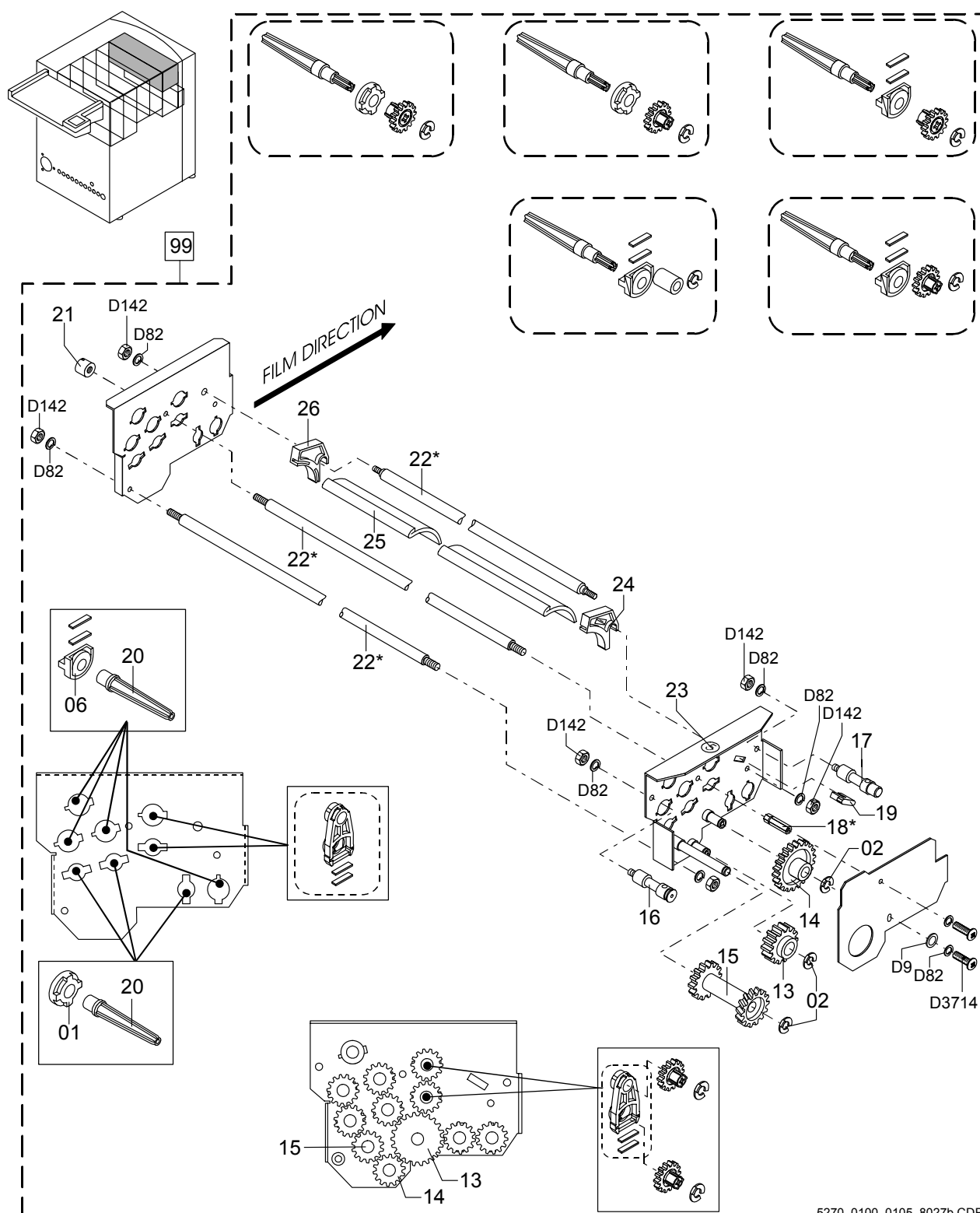
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DISTRIBUTOR UNIT (1/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8027b.CDR



DISTRIBUTOR UNIT (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 13 | CM+9839180760 | ZAHNRAD M=1,5 / Z=15 GEAR M=1,5 / T=15 ROUE DENTEE M=1,5 / D=15 |
| 14 | CM+9520051330 | ZAHNRAD M=1,5 / Z=24 / SCHWARZ GEAR M=1,5 / T=24 / BLACK ROUE DENTEE M=1,5 / D=24 / NOIR |
| 15 | CM+9521027362 | KOMBIRAD Z11/15 SCHWARZ COMBINATION WHEEL Z11/15 BLACK ROUE COMBINEE Z11/15 NOIR |
| 16 | CM+9520051030 | BOLZEN BOLT BOULON |
| 17 | CM+9520051041 | BOLZEN BOLT BOULON |
| 18 | CM+9521281110 | * BOLZEN BOLT BOULON |
| 19 | CM+9818560232 | HALTESTOPFEN STOPPER BOUCHON DE RETENUE |
| 20 | CM+9520051422 | BOLZEN BOLT BOULON |
| 21 | CM+9521081040 | BOLZEN BOLT BOULON |
| 22 | CM+9527282040 | * ZUGANKER - 5270/100 AB FN2328; 5270/105 FN1048 TIE ROD - 5270/100 FROM SN2328; 5270/105 SN1048 TIRANT - 5270/100 A PARTIR DE NS2328; 5270/105 NS1048 |
| 22 | CM+9520051141 | * ZUGANKER - 5270/100 BIS FN2327; 5270/105 FN1047 TIE ROD - 5270/100 UP TO SN2327; 5270/105 SN1047 TIRANT D'ANCRAGE - 5270/100 JUSQU'AU NS2327; 5270/105 NS1047 |
| 23 | CM+9527011041 | KLEBESCHILD ADHESIVE LABEL ETIQUETTE ADHÉSIVE |
| 24 | CM+9520056022 | HALTER LINKS HOLDER LHS FIXATION A GAUCHE |
| 25 | CM+9520056032 | LEITBLECH UNTEN GUIDE PLATE BOTTOM TOLE DE GUIDAGE EN BAS |
| 26 | CM+9520056012 | HALTER RECHTS HOLDER RHS FIXATION À DROITE |
| 99 | CM+9527085002 | VERTEILEREINHEIT DISTRIBUTOR UNIT UNITE DE DISTRIBUTION |

□=Assembly

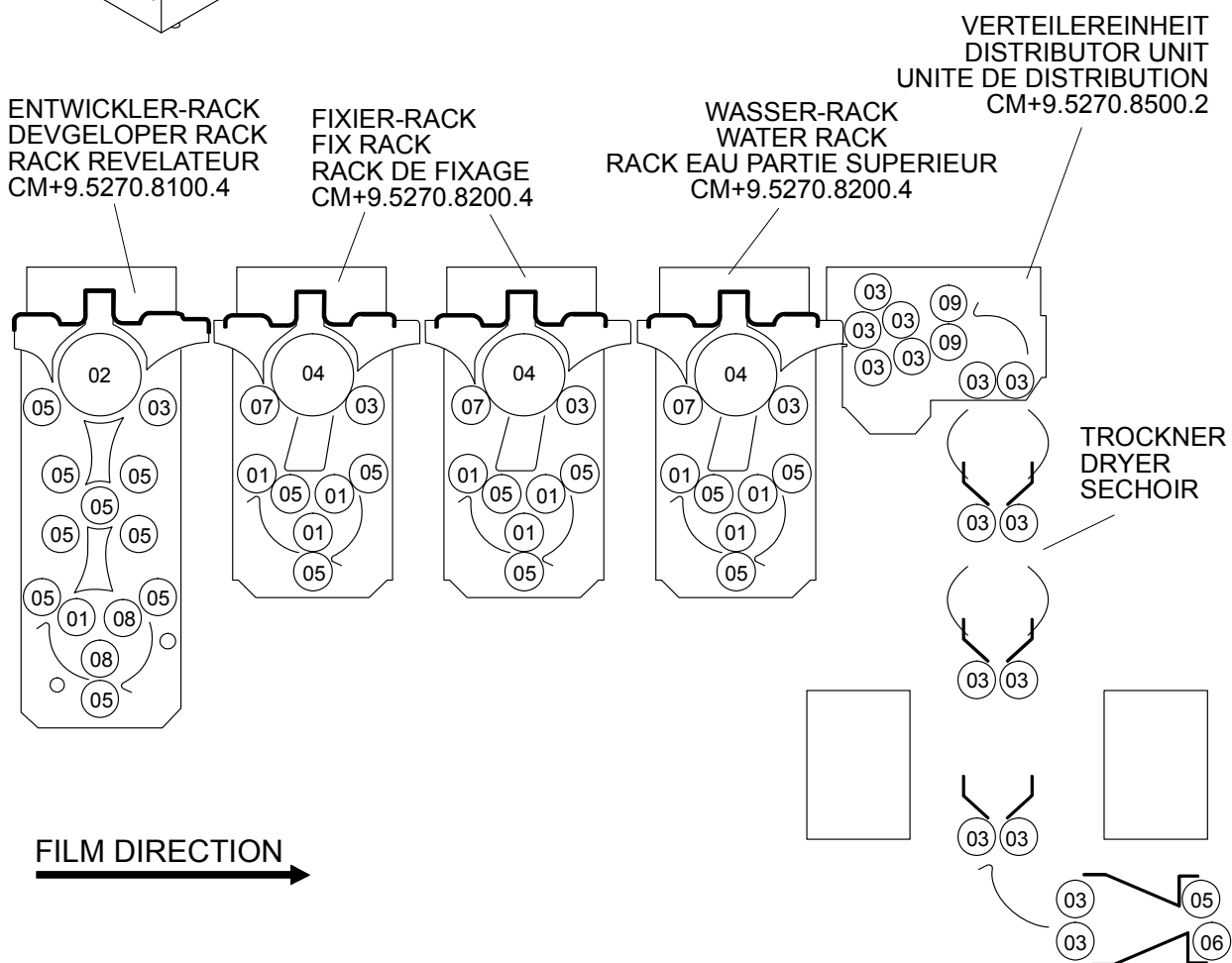
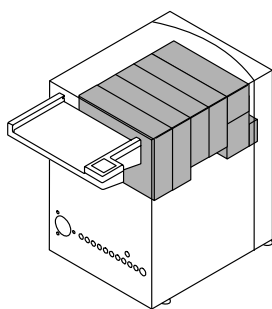
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

DISTRIBUTOR UNIT (2/2)

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



5270_0100_0105_8028.CDR



ROLLER POSITIONING PLAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9520051501 | WALZE (GUMMI 22,5) GRAU ROLLER (RUBBER 22,5) GREY ROULEAU (CAOUTCHOU 22,5) GRIS |
| 2 | CM+9520051602 | WALZE (GUMMI 48) GRAU ROLLER (RUBBER 48) GREY ROULEAU (CAOUTCHOU 48) GRIS |
| 3 | CM+9522061501 | WALZE (GUMMI 22,5) GRAU ROLLER (RUBBER 22,5) GREY ROULEAU (CAOUTCHOU 22,5) GRIS |
| 4 | CM+9520054202 | WALZE (PUR 48) GELB ROLLER (PUR 48) YELLOW ROULEAU (PUR 48) JAUNE |
| 5 | CM+9520054304 | WALZE (PUR 22,5) GELB ROLLER (PUR 22,5) YELLOW ROULEAU (PUR 22,5) JAUNE |
| 6 | CM+9521060682 | WALZE (GUMMI 22,6) MIT EINSTICH ROT ROLLER (RUBBER 22,6) WITH RECESS RED ROULEAU (CAOUTCHOU 22,6) AVEC MÊPLAT ROUGE |
| 7 | CM+9520054403 | WALZE (PUR 22,5) GELB (PUR-GESCHLIFFEN) ROLLER (PUR 22,5) YELLOW (PUR ROUGH) ROULEAU (PUR 22,5) JAUNE (PUR POLIE) |
| 8 | CM+9521083601 | WALZE (GUMMI 22,8) GRAU ROLLER (RUBBER 22,8) GREY ROULEAU (CAOUTCHOU 22,8) GRIS |
| 9 | CM+9527085700 | WALZE (GTK- 722A - D22,5) GRAU ROLLER (GTK- 722A - D22,5) GREY ROULEAU (GTK- 722A - D22,5) GRIS |

☐ =Assembly

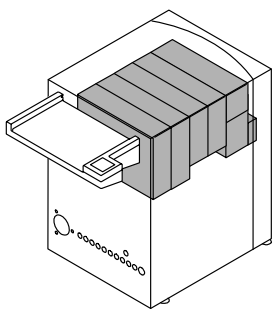
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

ROLLER POSITIONING PLAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

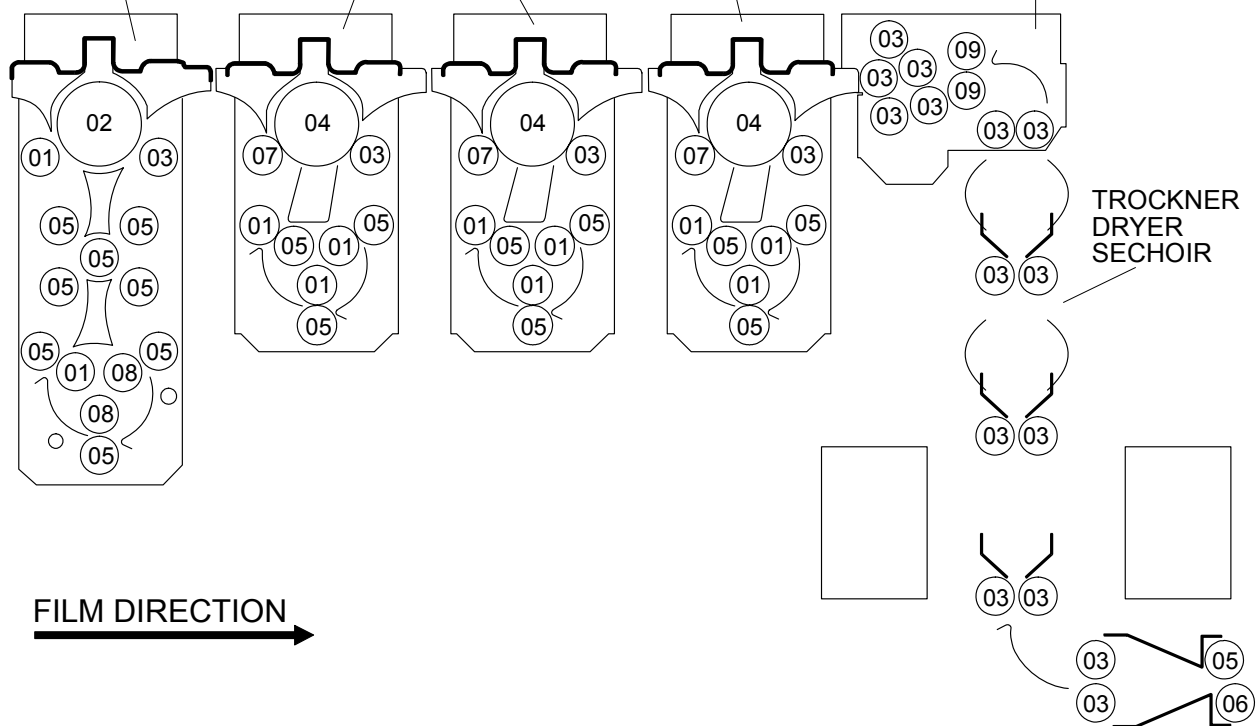


ENTWICKLER-RACK
DEVELOPER RACK
RACK REVELEATEUR
CM+9.5270.8140.0

FIXIER-RACK
FIX RACK
RACK DE FIXAGE
CM+9.5270.8200.4

WASSER-RACK
WATER RACK
RACK EAU PARTIE SUPERIEUR
CM+9.5270.8200.4

VERTEILEREINHEIT
DISTRIBUTOR UNIT
UNITE DE DISTRIBUTION
CM+9.5270.8500.2



5270_0100_0105_8029.CDR



ROLLER POSITIONING PLAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9520051501 | WALZE (GUMMI 22,5) GRAU ROLLER (RUBBER 22,5) GREY ROULEAU (CAOUTCHOUC 22,5) GRIS |
| 2 | CM+9520051602 | WALZE (GUMMI 48) GRAU ROLLER (RUBBER 48) GREY ROULEAU (CAOUTCHOUC 48) GRIS |
| 3 | CM+9522061501 | WALZE (GUMMI 22,5) GRAU ROLLER (RUBBER 22,5) GREY ROULEAU (CAOUTCHOUC 22,5) GRIS |
| 4 | CM+9520054202 | WALZE (PUR 48) GELB ROLLER (PUR 48) YELLOW ROULEAU (PUR 48) JAUNE |
| 5 | CM+9520054304 | WALZE (PUR 22,5) GELB (PUR 22,5) ROLLER (PUR 22,5) YELLOW (PUR 22,5) ROULEAU (PUR 22,5) JAUNE (PUR 22,5) |
| 6 | CM+9521060682 | WALZE (GUMMI 22,6) MIT EINSTICH ROT ROLLER (RUBBER 22,6) WITH RECESS RED ROULEAU (CAOUTCHOUC 22,6) AVEC MÊPLAT ROUGE |
| 7 | CM+9520054403 | WALZE (PUR 22,5) GELB ROLLER (PUR 22,5) YELLOW ROULEAU (PUR 22,5) JAUNE |
| 8 | CM+9521083601 | WALZE (GUMMI 22,8) GRAU (GUMMI 22,8) ROLLER (RUBBER 22,8) GREY (RUBBER 22,8) ROULEAU (CAOUTCHOUC 22,8) GRIS (CAOUTCHOUC 22,8) |
| 9 | CM+9527085700 | WALZE (GTK- 722A - D22,5) GRAU (GTK-SCHAUMWALZE 22,5) ROLLER (GTK- 722A - D22,5) GREY (GTK-FOAM PLASTIC 22,5) ROULEAU (GTK- 722A - D22,5) GRIS (GTK ALVEOLAIRE 22,5) |

☐ =Assembly

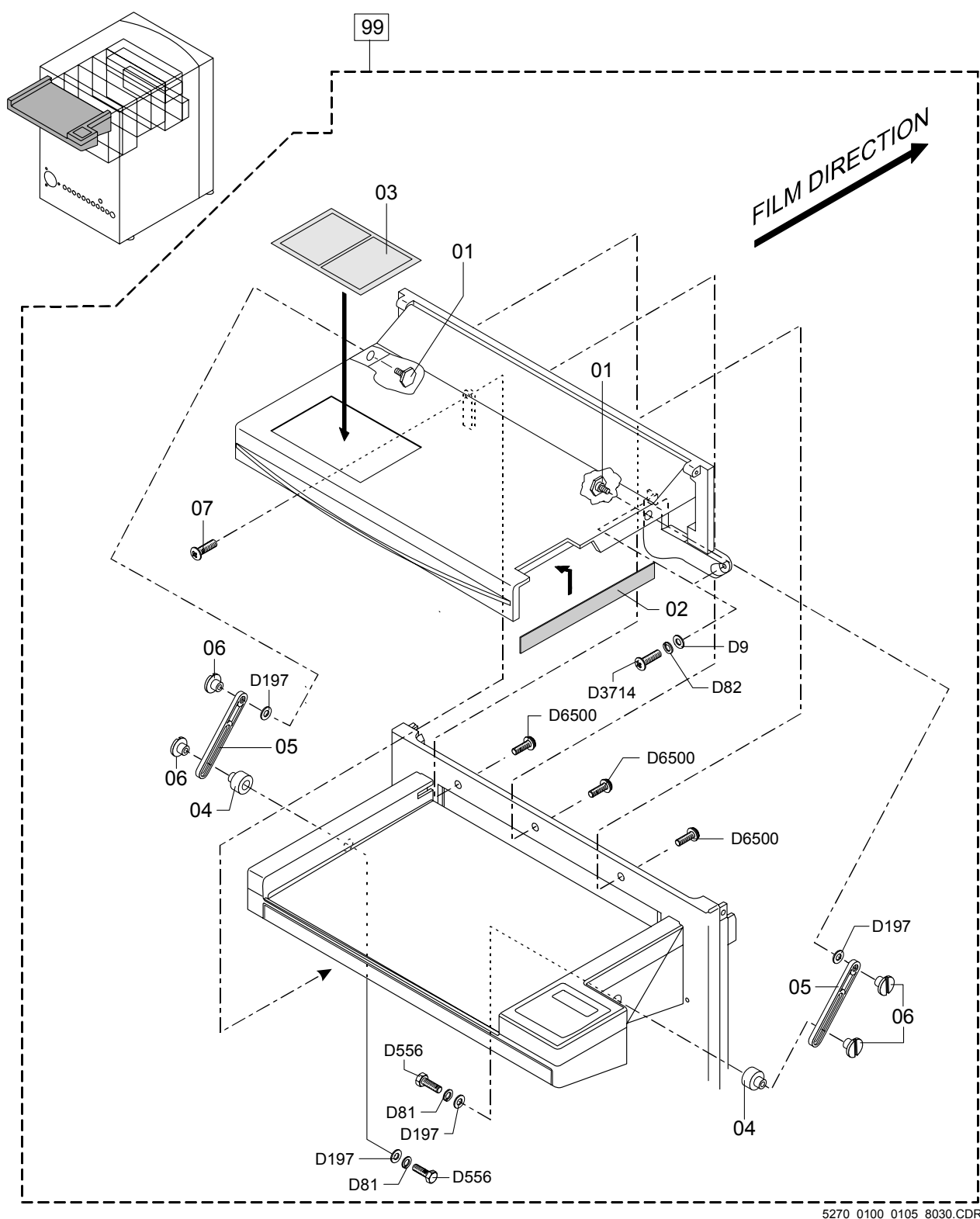
D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

ROLLER POSITIONING PLAN

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



LIGHT TIGHT COVER ACCESSORIE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+9527030930 | BOLZEN BOLT BOULON |
| 2 | CM+9527030850 | FILZSTREIFEN FELT STRIP BANDE DE FEUTRE |
| 3 | CM+9527030890 | AUFKLEBER ADHESIVE LABEL ETIQUETTE ADHESIVE |
| 4 | CM+9527030910 | DISTANZBUCHSE SPACER BUSH ECARTEUR |
| 5 | CM+9527030941 | HEBEL-PAAR LEVER-PAIR LEVIER-PAIRE |
| 6 | CM+9818520140 | BOLZEN BOLT BOULON |
| 7 | CM+9527030960 | EJOT-SCHRAUBE EJOT-SCREW EJOT-VIS |
| 99 | CM+9527030701 | LICHTSCHUTZDECKEL LIGHT COVER PAROI ÉTANCHE À LA LUMIÈRE |

☐ =Assembly

D =Standard part. For order please refer to the separate spare parts list for standard parts "DD+DIS011.93M"

* =No wearing part.

LIGHT TIGHT COVER ACCESSORIE

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Spare Parts Kit Categories

R 'Repair'

Parts required to repair a machine

Kit `R` should be part of the field service engineers' car stock.
Quantity covers requirements for ca. 10 machines.

Adapt quantity locally depending on:

- number of machines
- extension of the service area
- local service structure (centralized / decentralized)
- stockpiling

I 'Installation'

Parts required to install a machine

Kit `I` should be available as case stock.
Includes all parts to perform the installation (does not comprise parts included in the shipment).
Quantity covers one single machine installation.

M 'Maintenance'

Parts required to maintain a machine

Kit `M` should be available as case stock.
Includes all parts required to perform a maintenance according to the maintenance checklist.
Quantity covers one single maintenance.

L 'Local stock'

Extremely expensive or bulky parts

Kit `L` should be part of the local central warehouse.
Determine quantity depending on costs and on the installed base.

Spare Parts Kit Order numbers

| Order number | Spare Part Kit | version |
|-----------------|----------------------------|---------|
| CM+052700100731 | CLASSIC E.O.S. Sortiment R | 5 |
| CM+052700100732 | CLASSIC E.O.S. Sortiment I | 4 |
| CM+052700100733 | CLASSIC E.O.S. Sortiment M | 2 |
| CM+052700100734 | CLASSIC E.O.S. Sortiment L | 2 |



DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Type Overview

This spare parts list is valid for the following machine type(s):

| Device Name | Type No. | Specification |
|-------------------|-----------|-------------------------|
| CLASSIC E.O.S. | 5270/0100 | 230 V (200-240 V) 50/60 |
| CLASSIC E.O.S. CL | 5270/0105 | 230 V (200-240 V) 50/60 |



Accessory Overview

Following accessories are separately available:

| Accessory | Order number |
|--|---------------|
| REPLENISHER TANKS (2X30 L) WITH LEVEL SENS./CBL 5M | FI1XL |
| REPLENISHER TANKS (2X80 L) WITH LEVEL SENS./CBL 6M | F98XW |
| MIXER COMMUNICATION CABLE, 20 M | CM+9528030301 |
| MIXER | FT7BV |
| LIGHT TIGHT COVER CLASSIC | EHA2H |

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Document No: DD+DIS022.05M

Copyright © 2007 Agfa HealthCare N.V.

All rights reserved.

Technical Modifications reserved.

Published by
Agfa HealthCare N.V.
Tegernseer Landstraße 161
D - 81539 München
Germany

www.agfa.com

AGFA and the Agfa-Rhombus are trademarks of Agfa HealthCare N.V.



DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Agfa Company Confidential

AGFA 
HealthCare

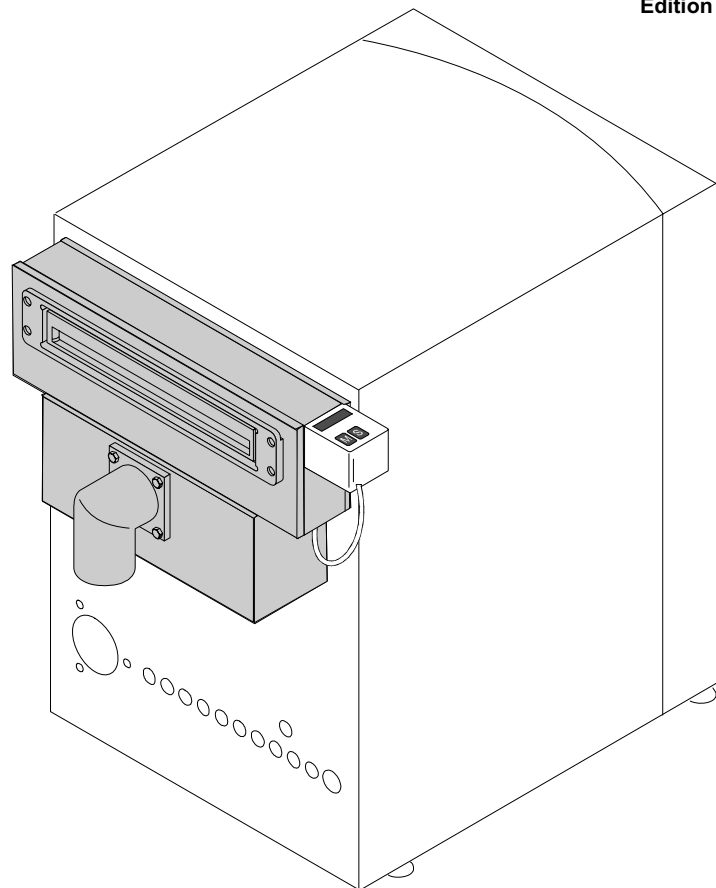
Ersatzteilliste Spare Parts List Liste des Pièces de Rechange

Order No.: DD+DIS060.03M

Thoramat Docking Kit

Type 5270/0200

Edition 5, Revision 3



5270_0200_TITEL.CDR

Die Ersatzteilliste ist gesondert lieferbar: Bestellnummer DD+DIS060.03M

The spare parts list is available separately. Order number DD+DIS060.03M

La liste des pièces détachées est à votre disposition séparément: No. de Ref. DD+DIS060.03M

internal update #: 2

CONFIDENTIALITY NOTE:

Use, dissemination, distribution or reproduction of this document by unauthorized personnel is not permitted and may be unlawful.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

printed in Germany 12-2006

Agfa Company Confidential

Document Node ID: 13959235

Copyright © 2006 Agfa-Gevaert HealthCare



WARNING:

Improper operation or service activities may cause damage or injuries.

INSTRUCTION:

1. Read the "Generic Safety Directions" document (see [MEDNET GSO => General Info => Agfa HealthCare => Publications => Service Manual](#)) prior to attempting any operation, repair or maintenance task on the equipment.
2. Strictly observe all safety directions within the "Generic Safety Directions" and on the product.

Revision History:

| | | | |
|---|------------|------------|--------------|
| 2006/12 | Revision 3 | Author: AL | Approver: GK |
| The changes to the previous version Edition 5, Revision 2 are: | | | |
| <ul style="list-style-type: none"> • Spare Parts List completely revised | | | |

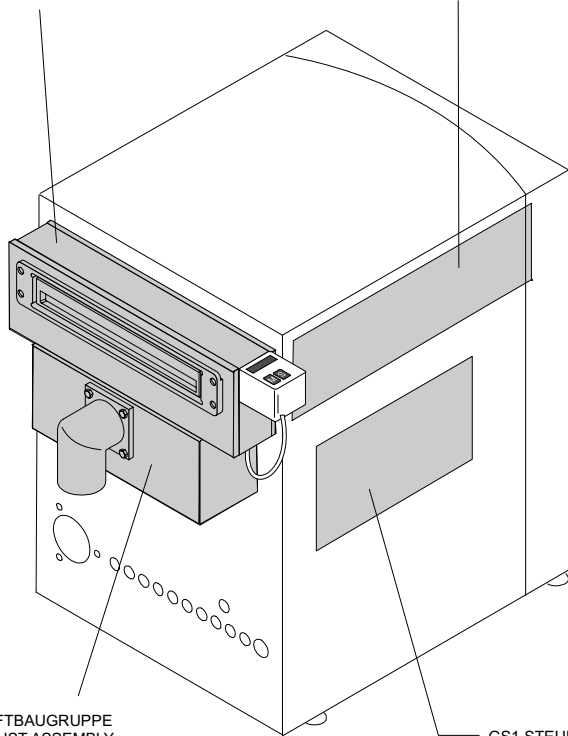
DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Inhaltsverzeichnis - Contents - Table de matières

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITE DE TRANSPORT DOCKING
PAGES 06 - 11

ANTRIEBSWELLE KOMPLETT
DRIVE SHAFT COMPL.
ARBRE D'ENTRAÎNEMENT COMPL.
PAGES 14 - 15



ABLUFTHAUGRUPPE
EXHAUST ASSEMBLY
MODUL D'ÉVACUATION DE L'AIR
PAGES 12 - 13

GS1 STEUERKARTE
CONTROL BOARD
CARTE DE COMMANDE
PAGES 04 - 05

5270_0200_INHALT.CDR

**External Partners: For ordering spare parts
contact your local AGFA representative.**

Please refer to:

www.agfa.com => HealthCare => ABOUT US => Agfa HealthCare worldwide

For Recycling information refer to:

<http://intra.agfanet/cd/ep/ehs.nsf>

**WARNING:**

**Hazards may be introduced because of component failure or
improper operation.**

Replace defective parts with Agfa® HealthCare original spare parts.
Use only tools and measuring instruments which are suitable for the
respective procedure.

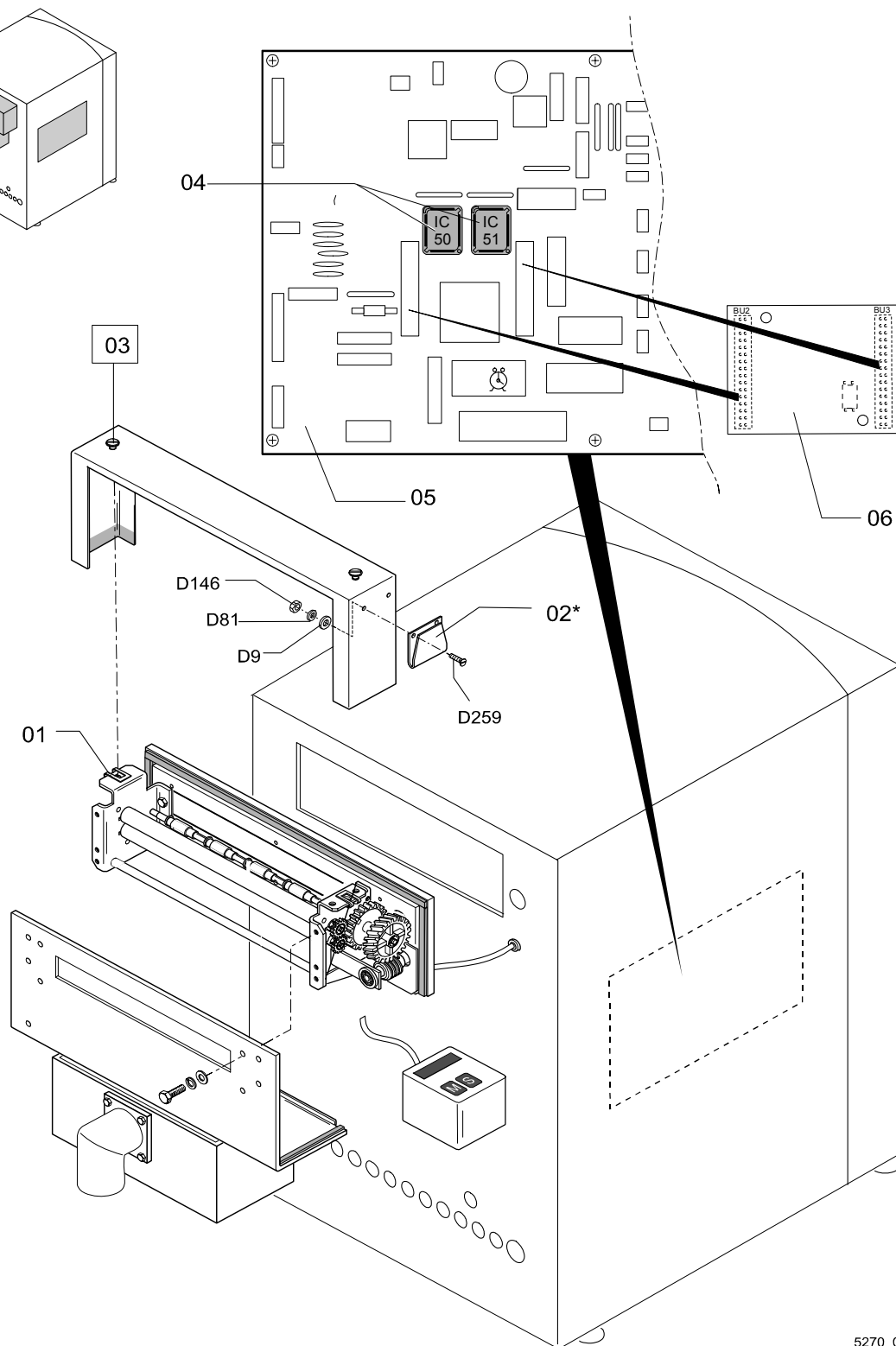
DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Ersatzteilliste / Spare Parts List / Liste des Pièces de Rechange



5270_0200_8001.CDR

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ABLUFT-UND TRANSPORTBAUGRUPPE
EXHAUST-AND TRANSPORT ASSEMBLY
MODULE D'EXTRACTION DE L'AIR ET CELUI DE TRANSPORT

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|---|--------------------------------------|---|
| 1 | CM+9033175760 | AUFSTECKHALTERUNG SLIP-ON MOUNT FIXATION EMBOITABLE |
| 2 | CM+9521637330 | * KLEMMTEIL CLAMP AGRAVE |
| <div style="border: 1px solid black; padding: 2px;">3</div> | CM+9527091501 | VERSCHLUßZAPFEN KOMPLETT STUD COMPLETE PIVOT DE VERROUILLAGE COMPLETE |
| 4 | CM+9527093504 | EPROM-SATZ IC50 / IC51 EOSUNIV 1102 - (BIS FN1101) EPROM-SATZ IC50 / IC51 EOSUNIV 1102 - (UP TO SN1101) EPROM-SATZ IC50 / IC51 EOSUNIV 1102 - (JUSQU'AU NS1101) |
| 4 | CM+9527094103 | EPROM-SATZ IC50/51 CLLC1301 - (AB FN1138) EPROM SET IC50/51 CLLC1301 - (FROM SN1138) EPROM VANNES IC50/51 CLLC1301 - (A PARTIR DE NS1138) |
| 5 | CM+9527079601 | STEUERKARTE COMPACT - (GS1) CONTROL BOARD COMPACT BOITE ELECTRONIQUE COMPACT |
| 6 | CM+9527078800 | FILM-AUSGANGSSENSOR - (GS3) FILM DETECTION DETECTION FILM |

☐=Assembly

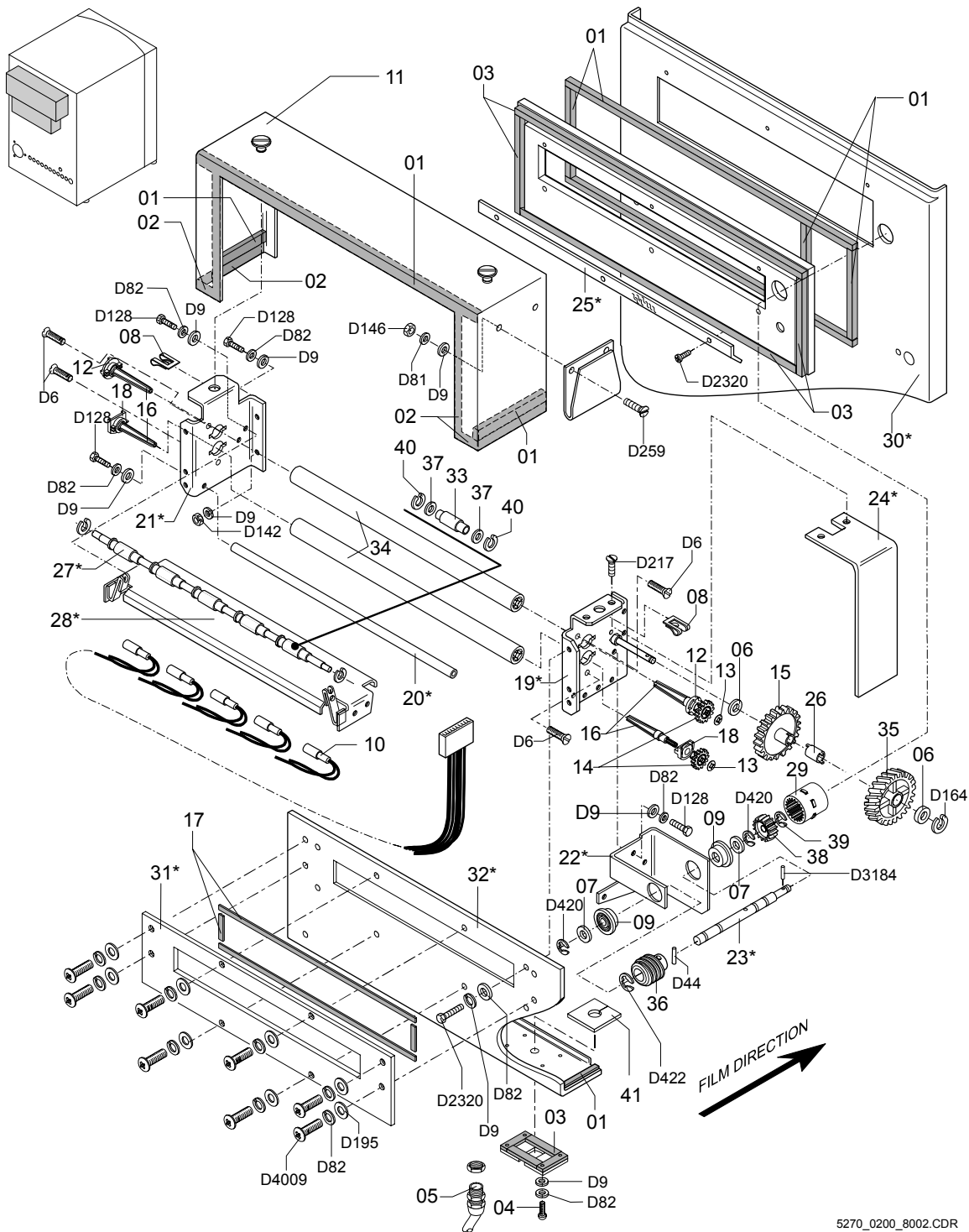
D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ABLUFT-UND TRANSPORTBAUGRUPPE
EXHAUST-AND TRANSPORT ASSEMBLY
MODULE D'EXTRATION DE L'AIR ET CELUI DE TRANSPORT



5270_0200_8002.CDR

DOCUMENT CONTROL NOTE:
The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 1 | CM+0000014259 | KLEBEBAND 12X12 ADHESIVE TAPE BANDE ADHESIVE |
| 2 | CM+0000001927 | PLÜSCHBAND SELBSTKL. B=11MM VELVET BAND ADHESIVE BANDE EN VELOURS |
| 3 | CM+9527310250 | KLEBEBAND 12X5 645MM ADHESIVE TAPE BANDE ADHESIVE |
| 4 | CM+9023003300 | ISO 7045 - M4X12 A4 - Z ISO 7045 - M4X12 A4 - Z ISO 7045 - M4X12 A4 - Z |
| 5 | CM+9047910460 | KABELVERSCHRAUBUNG PG9 CABLE PROTECTOR COLLIER DE SERRAGE |
| 6 | CM+9032738100 | SCHEIBE-8x14x0,2-CuZn37 F37 WASHER RONDELLE |
| 7 | CM+9032757300 | SCHEIBE - 10,2x15x0,25-CuSn6 WASHER RONDELLE |
| 8 | CM+9033175760 | AUFSTECKHALTERUNG SLIP-ON MOUNT FIXATION EMBOITABLE |
| 9 | CM+9037101640 | KUGELLAGER SF 6800-2Z BALL BEARING ROULEMENT A BILLES |
| 10 | CM+9520071500 | KABELBAUM REEDKONTAKT CABLE HARNESS REED CONTACT FAISCEAU DE CABLE CONTACT REED |
| 11 | CM+9521637310 | ABDECKUNG COVER COUVERCLE |
| 12 | CM+9520051190 | LAGER BEARING PALIER |
| 13 | CM+9520051130 | SCHEIBE WASHER RONDELLE |
| 14 | CM+9520051321 | ZAHNRAD Z=15 / SCHWARZ GEAR WHEEL T=15 / BLACK ROUE DENTEE D=15 / NOIR |
| 15 | CM+9520051350 | ZAHNRAD M=1,5 / Z=32 / SCHWARZ GEAR M=1,5 / T=32 / BLACK ROUE DENTEE M=1,5 / D=32 / NOIR |
| 16 | CM+9520051412 | BOLZEN BOLT BOULON |
| 17 | CM+0000014261 | DICHTUNGSBAND 12X3 ADHESIVE TAPE BANDE ADHESIVE |
| 18 | CM+9522056700 | LAGER 2-FACH ANGEFEDERT BEARING DOUBLE SPRING LOADED PALIER A DOUBLE SUSPENSION |

□=Assembly

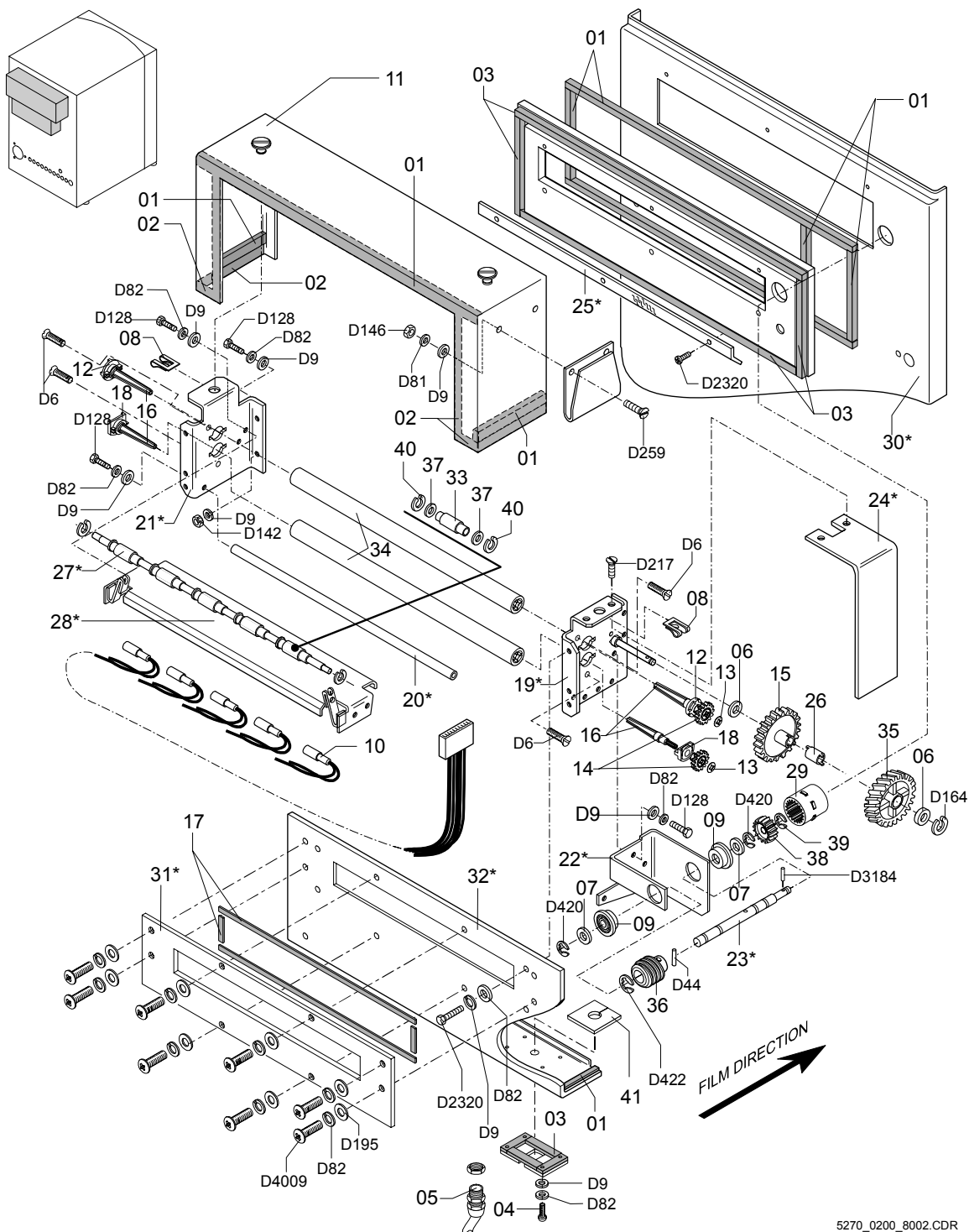
D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING



5270_0200_8002.CDR

DOCUMENT CONTROL NOTE:
The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 19 | CM+9527320300 | * PLATINE RECHTS GENIETET PLATE RHS RIVETED PLAQUE A DROITE |
| 20 | CM+9521620170 | * ZUGANKER TIE ROD TIRANT |
| 21 | CM+9527320400 | * PLATINE LINKS GENIETET PLATE LHS RIVETED PLAQUE A GAUCHE |
| 22 | CM+9527320710 | * GETRIEBEWINKEL TRANSMISSION BRACKET EQUERRE D'ENGRENAGES |
| 23 | CM+9527320751 | * SCHNECKENWELLE WORM GEAR SHAFT VIS SANS FIN |
| 24 | CM+9521620290 | * SCHUTZWINKEL COVER PLATE EQUERRE DE PROTECTION |
| 25 | CM+9527320600 | * LEITBLECH GUIDE PLATE TOLE DE GUIDAGE |
| 26 | CM+9521620410 | DISTANZBUCHSE SPACER BUSH ECARTEUR |
| 27 | CM+9521620572 | * STANGE ROD BARRE |
| 28 | CM+9527320500 | * TISCHPLATTE, GESCHWEISST TABLE PLATE WELDED PLAQUE DE TABLE |
| 29 | CM+9946021082 | KUPPLUNGSROHR PIPE UNION RACCORD |
| 30 | CM+9527031111 | * VORDERWAND, LACKIERT FRONT WALL, VARNISHED PAROI FRONTALE, VERNI |
| 31 | CM+9527021100 | * PLATTE PLATE PLAQUE |
| 32 | CM+9527021020 | * VERKLEIDUNGSTEIL - NACHARBEIT PANELING PART PANNEAU |
| 33 | CM+9522016801 | ABTASTROLLE DETECTOR ROLLER GALET DE DÉTECTION |
| 34 | CM+9522061501 | WALZE (GUMMI 22,5) GRAU ROLLER (RUBBER 22,5) GREY ROULEAU (CAOUTCHOUC 22,5) GRIS |
| 35 | CM+9818460810 | SCHRÄGSTIRNRAD HELICAL SPUR GEAR ROUE HELICOIDALE |
| 36 | CM+9818511420 | SCHNECKE WORM GEAR VIS SANS FIN |

□=Assembly

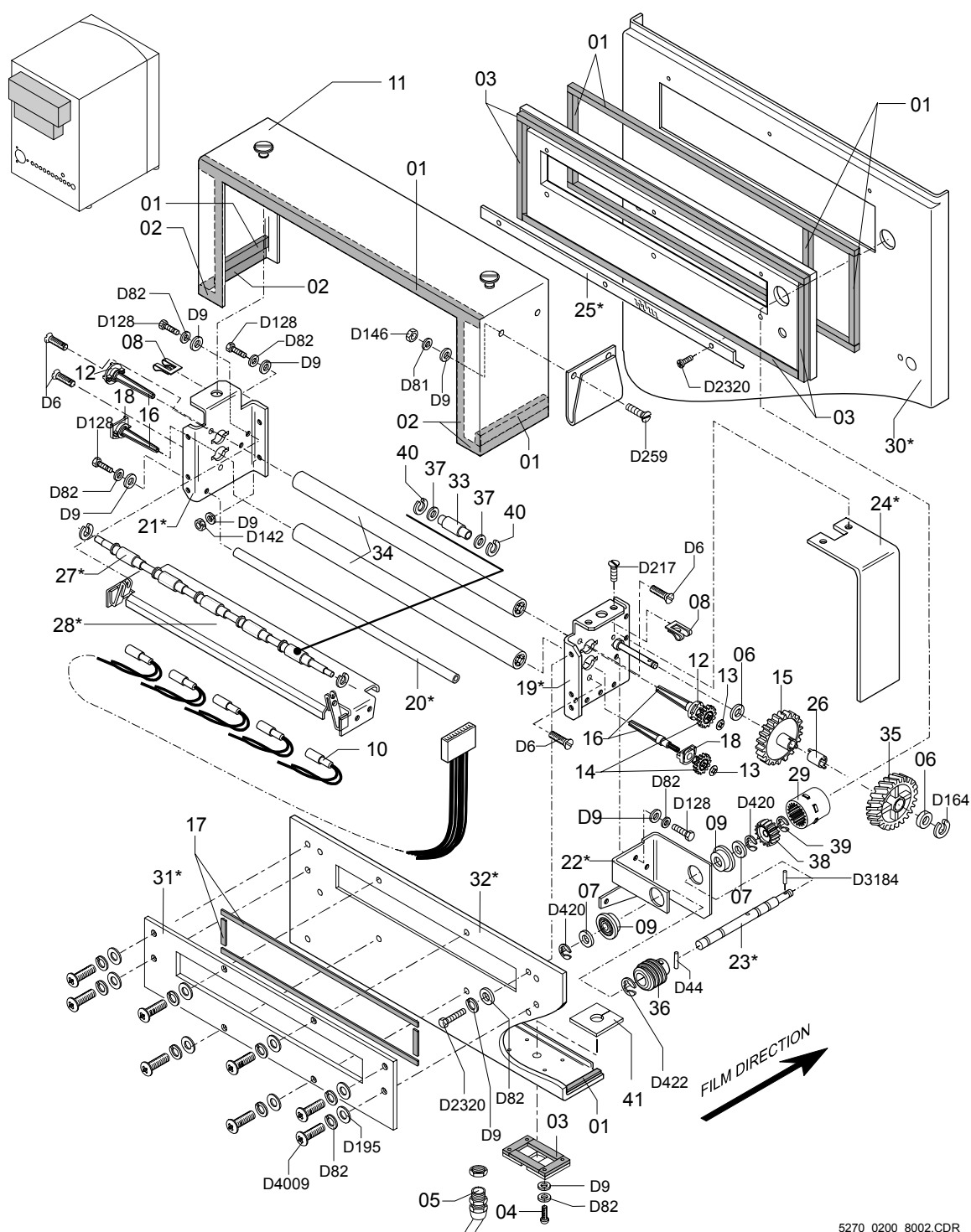
D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING



5270_0200_8002.CDR

DOCUMENT CONTROL NOTE:

DOCUMENT CONTROL NOTE:
The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| 37 | CM+9818565720 | SCHEIBE WASHER RONDELLE |
| 38 | CM+9940211011 | GERADSTIRNRAD M=1,5 / Z=15 SPUR GEAR M=1,5 / T=15 ROUE DENTEE M=1,5 / D=15 |
| 39 | CM+9940211290 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 40 | CM+9943230250 | SICHERUNGSSCHEIBE RETAINER RING RONDELLE D'ARRET |
| 41 | CM+9527337720 | DICHTUNGSPLATTE SEALING PLATE PLAQUE D'ETANCHEITE |

□=Assembly

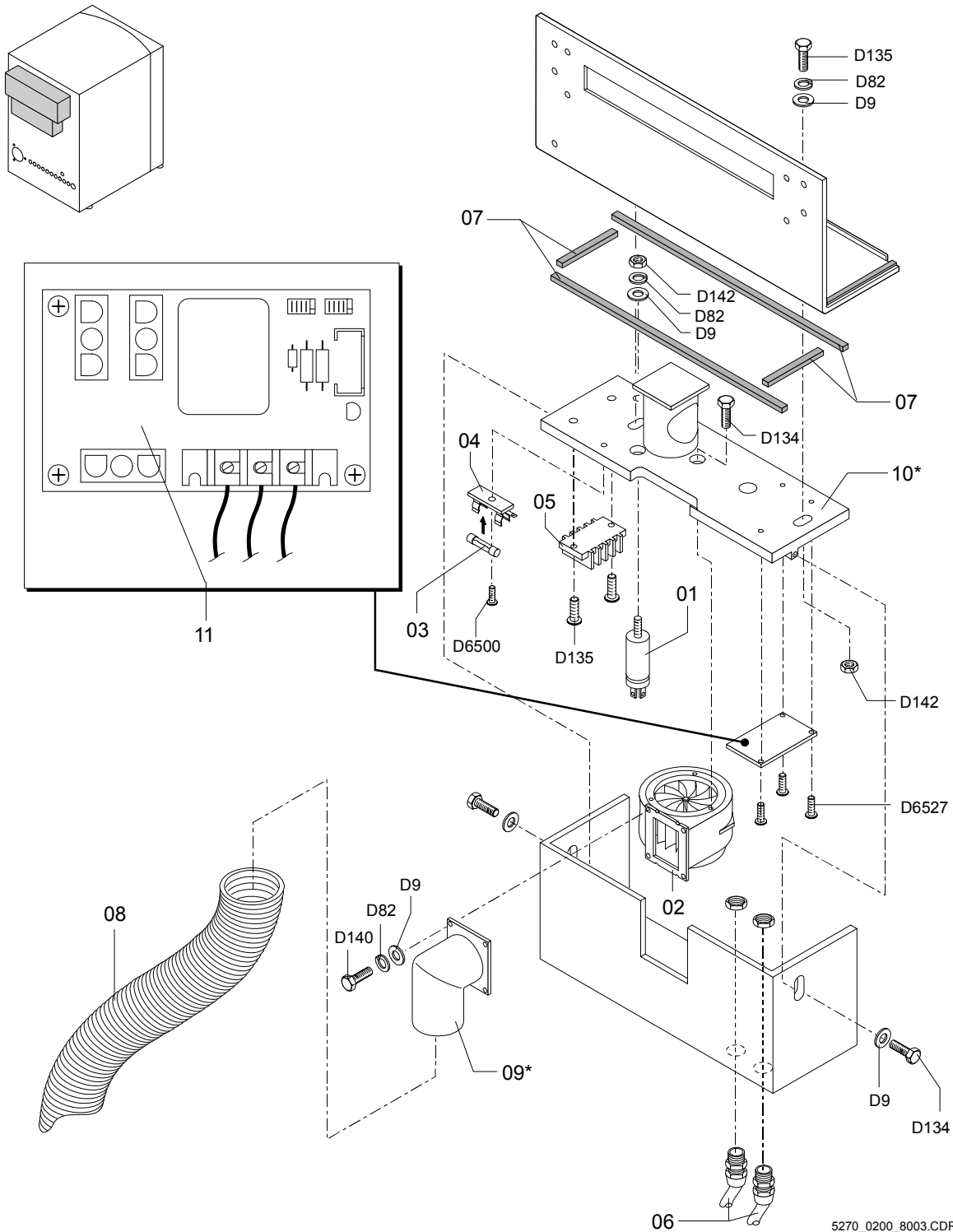
D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

TRANSPORTEINHEIT DOCKING
TRANSPORT UNIT DOCKING
UNITÉ DE TRANSPORT DOCKING



DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ABLUFT-BAUGRUPPE
EXHAUST ASSEMBLY
MODULE D'EXTRACTION DE L'AIR

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|---|
| 1 | CM+9041506300 | KONDENSATOR 1U/400V 25X48-AF CAPACITOR CONDENSATEUR |
| 2 | CM+9043100640 | LÜFTER 230V/60HZ 24L/S UL FAN VENTILATEUR |
| 3 | CM+9045196050 | SICHERUNG T 250MA FUSE T 250MA FUSIBLE T 250MA |
| 4 | CM+9045222420 | SICHERUNGSHALTER FUSE HOLDER PORTE FUSIBLE |
| 5 | CM+9047202700 | FLACHSTECKERLEISTE FLAT CONNECTOR TERMINAL STRIP BARRETTE PLATE DE RACCORDEMENT |
| 6 | CM+9047910470 | KABELVERSCHRAUBUNG PG11 CABLE CLAMP COLLIER DE SERRAGE |
| 7 | CM+0000014261 | DICHTUNGSBAND 12X3 ADHESIVE TAPE BANDE ADHESIVE |
| 8 | CM+9527021060 | PAPPSCHLAUCH NW50 L= 700MM CARDBOARD PIPE TUBE EN CARTON |
| 9 | CM+9527021200 | * ABSAUGKRÜMMER EXTRACTION ELBOW COUDE D'ASPIRATION |
| 10 | CM+9527021300 | * LÜFTERPLATTE FAN PLATE PLAQUE DE VENTILATEUR |
| 11 | CM+9527021700 | GS RELAISEKARTE RELAISECARD RELAISECARD |

□=Assembly

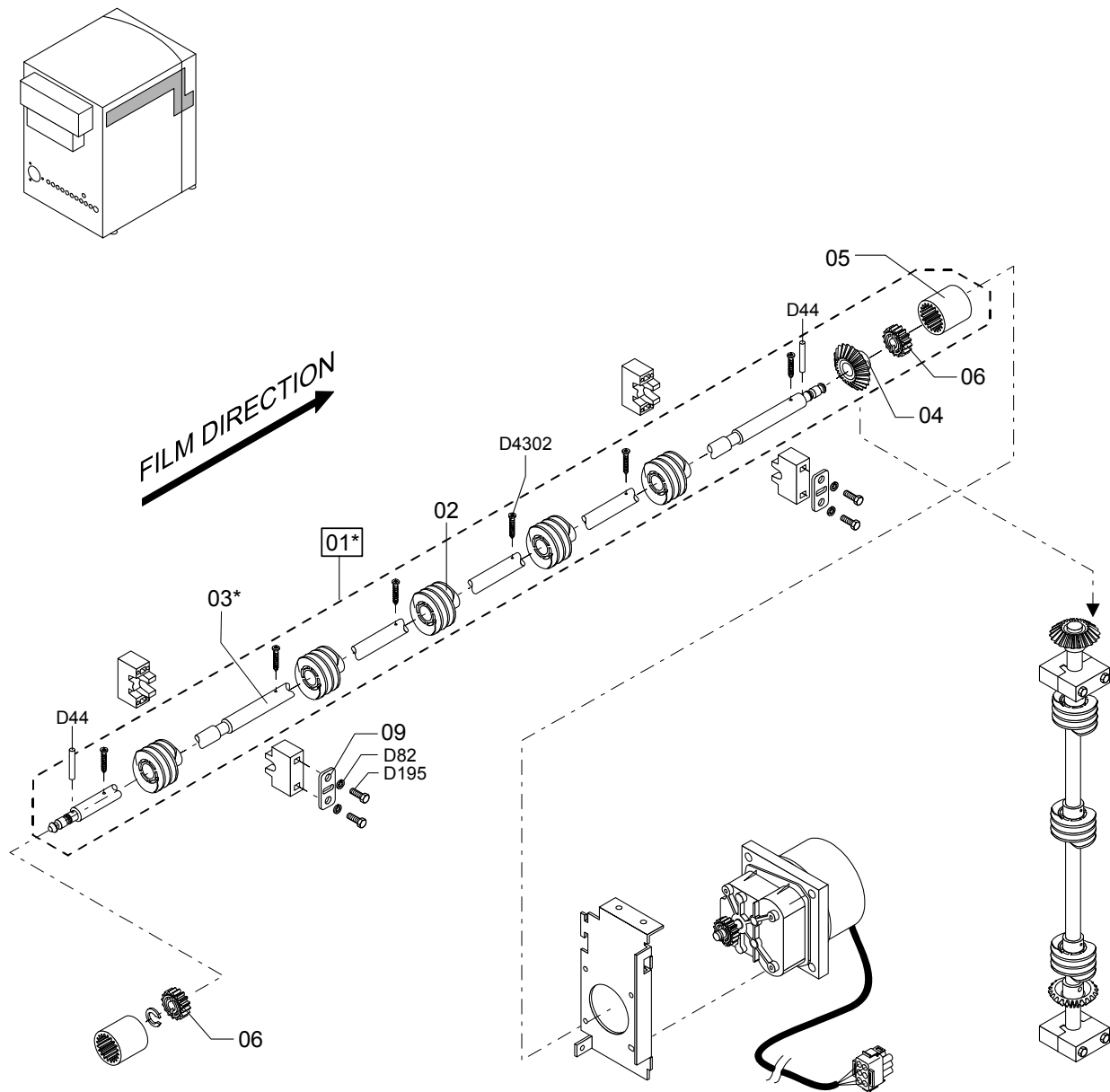
D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ABLUFT-BAUGRUPPE
EXHAUST ASSEMBLY
MODULE D'EXTRACTION DE L'AIR



5270_0200_8004.CDR

DOCUMENT CONTROL NOTE:
The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ANTRIEBSWELLE
DRIVE SHAFT
ARBRE DE COMMANDE

| Pos. Nr. Item no. Pos. no. | Teile-Nr. Part No. Nr. de Ref. | Benennung Description Denomination |
|----------------------------------|--------------------------------------|--|
| <div>1</div> | CM+9527021600 | ANTRIEBSWELLE VOLLSTÄNDIG DRIVE SHAFT COMPLETE. ARBRE D'ENTRAÎNEMENT COMPLET |
| 2 | CM+9520061062 | SCHNECKE M=2 / Z=2 / RECHTS WORM GEAR M=2 / TEETH=2 / RHS VIS SANS FIN M=2 / DENTS=2 / A DROIT |
| 3 | CM+9527011523 | * ANTRIEBSWELLE DRIVE SHAFT ARBRE D'ENTRAÎNEMENT |
| 4 | CM+9522012731 | KEGELRAD BEVEL GEAR ROUE DENTÉE |
| 5 | CM+9839534160 | KUPPLUNGSROHR PIPE UNION RACCORD |
| 6 | CM+9940211011 | GERADSTIRNRAD M=1,5 / Z=15 SPUR GEAR M=1,5 / T=15 ROUE DENTÉE M=1,5 / D=15 |

☐=Assembly

D =Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

* =Spare part not available from stock. Expect extended delivery time.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

ANTRIEBSWELLE
DRIVE SHAFT
ARBRE DE COMMANDE



Empfohlene Ersatzteilsortimente

Ersatzteilsortimente repräsentieren eine Auswahl wichtiger Teile aus der Ersatzteilliste.

Sortimentskategorien

- R** 'Repair' **Teilebedarf zur Reparatur des Geräts.**
Dieses Sortiment sollte der Techniker im Auto mitführen "Car Stock".
Die Mengen decken den Bedarf für bis zu 10 Geräte.
Lokal individuelle Mengenanpassungen vornehmen in Abhängigkeit von:
- Anzahl der Geräte
- Größe des Servicegebiets
- Servicestruktur (zentral/dezentral)
- Bevorratungszeit
- I** 'Installation' **Teilebedarf zur Installation des Geräts.**
Dieses Sortiment sollte als Kofferlager zur Verfügung stehen.
Es enthält alle gerätespezifischen Teile die zusätzlich zu den Teilen des
Gerätelieferumfangs zur Durchführung einer Installation benötigt werden.
Die Mengen reichen für eine einzige Geräteinstallation.
- M** 'Maintenance' **Teilebedarf zur Wartung des Geräts.**
Dieses Sortiment sollte als Kofferlager zur Verfügung stehen.
Dieses Sortiment muss für eine Wartung zur Verfügung stehen.
Es enthält alle gerätespezifischen Teile die zur Durchführung einer Wartung nach
Wartungscheckliste benötigt werden.
Die Mengen reichen für eine einzige Wartung.
- L** 'Local stock' Extrem teure oder sperrige Teile die im Zentrallager des Landes anstatt im R-Sortiment
zur Verfügung stehen sollten.
Strategischer Bestand unabhängig von der Anzahl der Geräteinstallationen.
Falls diese Teile Bestandteil des Serviceabkommens sind müssen sie nach Verwendung
umgehend wieder auf Lager gelegt werden.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Recommended Spare Parts Assortments

Spare Parts Assortments represent a selection of important parts out of the Spare Parts List.

Categories of Assortments

- R** 'Repair' **Parts required to repair a machine.**
This assortment should be available in the field service engineers' car stock
Quantity covers requirements for up to 10 machines.
Adapt the locally required individual amount depending on:
- number of machines
- extension of the service area
- service structure (centralized/decentralized)
- stockpiling
- I** 'Installation' **Parts required to install a machine.**
This assortment should be available in a suitcase.
It includes all machine specific parts required to perform the installation in addition to the parts included in the shipment.
Quantity covers one single machine installation
- M** 'Maintenance' **Parts required to maintain a machine.**
This assortment should be available in a suitcase.
This assortment must be available during a maintenance job, it includes all machine specific parts required to perform a maintenance according to the Maintenance check list.
Quantity covers one single maintenance.
- L** 'Local stock' Extremely expensive or bulky parts which should be kept in the country central warehouse instead of the R assortment.
Strategic stock quantity is independent of the installed base.
If service contract obligations refer to these parts, they must be replenished immediately.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.



Assortiments de pièces détachées

Les assortiments suivants représentent une sélection de pièces essentielles extraites de la liste de pièces détachées.

Catégories d'assortiments

- R** 'Repair' **Pièces requises pour la réparation de l'appareil.**
Le technicien devrait avoir cet assortiment dans son véhicule (= Carstock)
Cette quantité est suffisante pour la réparation de 10 appareils.
Adapter les quantités sur place d'après les critères :
- nombre d'appareils
- extension de la zone d'intervention
- structure du service technique (centralisation/décentralisation)
- temps d'approvisionnement
- I** 'Installation' **Pièces requises pour l'installation de l'appareil.**
Cet assortiment devrait être disponible dans une mallette.
Il contient toutes les pièces spécifiques à l'appareil requises pour effectuer l'installation en plus des pièces incluses dans la fourniture.
La quantité recouvre les besoins pour l'installation d'un seul appareil.
- M** 'Maintenance' **Pièces requises pour la révision de l'appareil.**
Cet assortiment devrait être disponible dans une mallette.
Cet assortiment doit être disponible pendant la révision.
Il contient toutes les pièces spécifiques à l'appareil pour effectuer la maintenance en fonction de la Maintenance check list.
Cette quantité est suffisante pour la révision d'un seul appareil.
- L** 'Local stock' **Pièces encombrantes, extrêmement onéreuses qui devraient être stockées dans le magasin central de votre pays à la place de l'assortiment R.**
La réserve de pièces stratégiques ne dépend pas du nombre d'appareils installés.
Si le contrat de maintenance fait référence à ces pièces elles doivent être remplacées immédiatement.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Bestellung von Sortimenten

Bestellung AGFA intern:

Code AH602A im EVS öffnen, Sortimentsnummer für das gewünschte Sortiment R, I, M oder L eingeben und Einzelteile bestellen.

Bestellung durch AGFA Partner:

Das gewünschte Sortiment bei der zuständigen AGFA Vertretung mit Angabe der betreffenden Sortimentsnummer R, I, M oder L bestellen.

Ordering of Spare Part Kits

AGFA internal orders:

Open Code AH602A in the EVS, enter the kit number for the required assortment R, I, M, or L and order individual parts.

Orders of AGFA partners:

Order the required assortment via the responsible AGFA Agency listing the respective kit number of assortment R, I, M, or L.

Commande d'assortiments

Commande interne à AGFA :

ouvrir le code AH602A dans EVS, écrire le numéro de l'assortiment souhaité comme R, I, M ou L et passer commande des pièces.

Commande par les partenaires d'AGFA :

passer commande de l'assortiment souhaité auprès du dépositaire AGFA en charge en indiquant le numéro de l'assortiment comme R, I, M ou L.

CM+052700200731 Thoramat Docking Kit Sortiment R

Version 2

CM+052700200734 Thoramat Docking Kit Sortiment L

Version 2

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Typenverzeichnis / Type List / List de Type

| | | |
|----------------------|---|-----------|
| CLASSIC E.O.S. CL | - | 5270/0105 |
| Thoramat Docking Kit | - | 5270/0200 |

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Optionen / Options / Options

- INTENTIONALLY LEFT BLANK -

Nur über Vertrieb bestellbar / Can only be ordered through Sales / Passer commande uniquement par le service des ventes

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

Copyright © 05.12.2006 DD+DIS060.03M Agfa-Gevaert HealthCare
Alle Rechte vorbehalten / All rights reserved / Tous droits réservés

Herausgegeben von / Published by / Edité par

Agfa-Gevaert HealthCare
Tegernseer Landstraße 161
D - 81539 München

Technische Änderungen vorbehalten
Technical modifications reserved
Sous réserve des modifications techniques

AGFA und der Agfa-Rhombus sind eingetragene Warenzeichen von Agfa-Gevaert HealthCare
AGFA and the Agfa-Rhombus are trade marks of Agfa-Gevaert HealthCare
AGFA et le logo Agfa sont des marques déposées de Agfa-Gevaert HealthCare

Section 9

describes the installation of accessories (assembly types).

Repair, maintenance and spare parts of accessories are implemented in the machine documentation or available as separate documentation.

Chapter 9

Contents

| Revision | Order number | Contents |
|----------|---------------|--|
| 09.11.00 | DD+DIS309.00E | Installation Instructions for the Light Tight Cover CM+9.5270.3070.1 |

Order number: DD+DIS309.00E

November 2000



1 piece UDN28 MA 1

F7.5270.3071.1

(only for production purposes)

Accessories for the machines

Classic E.O.S. **Type 5270/100/105** **Mamoray Classic** **E.O.S.** **Type 5272/100**

Please file these modification instructions in section „Options“ of your *TECHNICAL DOCUMENTATION*. This document replaces the modification instructions DD+DIS136.00E.

Installation Instructions **for the Light Tight Cover** **CM+9.5270.3070.1**



This document is part of the *TECHNICAL DOCUMENTATION* and part of the spare part CM+9.5270.3070.1. It describes the installation of the light tight cover for the Classic E.O.S. (Type 5270/100/105) and Mamoray Classic E.O.S. (Type 5272/100).

Aim of the option:

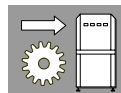
With the light tight cover closed there is no need to wait for completion of the film feed.



approx $\frac{3}{4}$ h

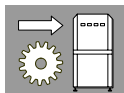


no special tools necessary



Contents

| | | |
|------------|--|----------|
| 1 | Scope of delivery | 1 |
| 2 | Required tools | 1 |
| 3 | Preparations | 2 |
| 3.1 | Pasting over of the crevices beneath the film feed..... | 3 |
| 4 | Using the drilling templates | 4 |
| 5 | Mounting the light tight cover | 5 |
| 6 | Additional sealing of the display housing | 6 |
| 7 | Mounting the guide bracket on the light tight cover | 7 |
| 8 | Completion of the modification | 8 |



1

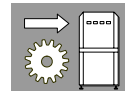
Scope of delivery

| Quantity | Designation |
|----------|--------------------------------------|
| 1 | Light tight cover |
| 1 | Twist drill Ø 4.0 |
| 1 | Twist drill Ø 6.0 |
| 3 | Screws M3x20 (Phillips screw) |
| 2 | Drilling template |
| 2 | light tight strip (black sticker) |
| 2 | Covering |
| 2 | Spacer bushing |
| 2 | Spring washer |
| 2 | Washer |
| 2 | Stud |
| 1 | Feed table sealing |
| 2 | Screw M3x20 (hexagon screw) |
| 1 | EJOT screw KB70x14 |

2

Required tools

| Quantity | Designation |
|----------|--------------------------------------|
| 1 | Screwdriver (Phillips), size 1 |
| 1 | Screwdriver, (blade width 10x0.8) |
| 1 | Wrench, size 5.5 |
| 1 | Pointed pliers |
| 1 | Drilling machine |



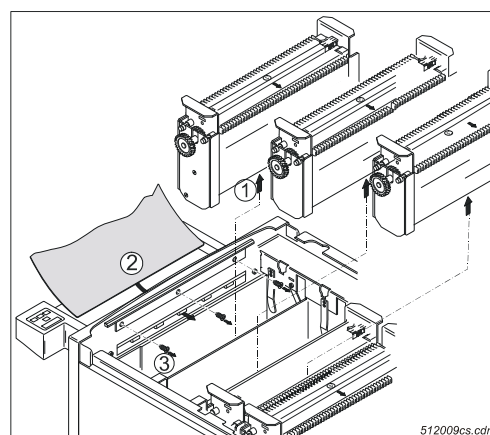
3 Preparations

1. Disconnect the machine from the mains (unplug the mains connector).
2. Remove the machine cover.
3. Remove the developer rack and the two fixer racks.



If it is not possible to drain the chemical solutions, make sure to cover them. Covering the tanks with a film should prevent metal chips from falling into the chemical solutions during the drilling work.

1. Insert a film through the film feed.
2. Pull the film across the racks until the developer and fixer tanks are covered.
3. Remove the 3 screws at the inner wall at the side of the film feed table (see ③ in figure 1).



**Figure 1: Machine inside
(film feed side)**

4. Drill through the existing holes at the machine inside (drill $\varnothing 4.0$).
5. Remove the film and chips carefully.

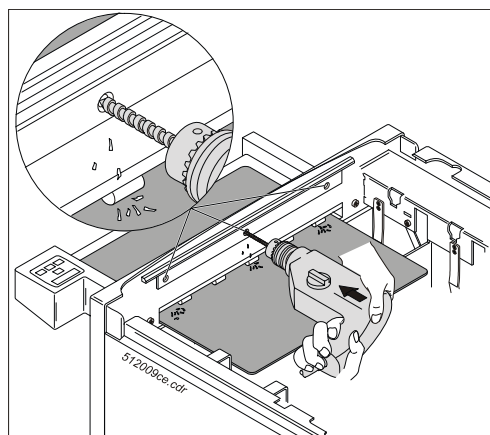
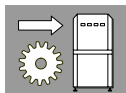


Figure 2: Drilling



4. Remove the cable cover by undoing the two screws ① below the film feed table.
5. Remove the display cover by undoing screw ②.

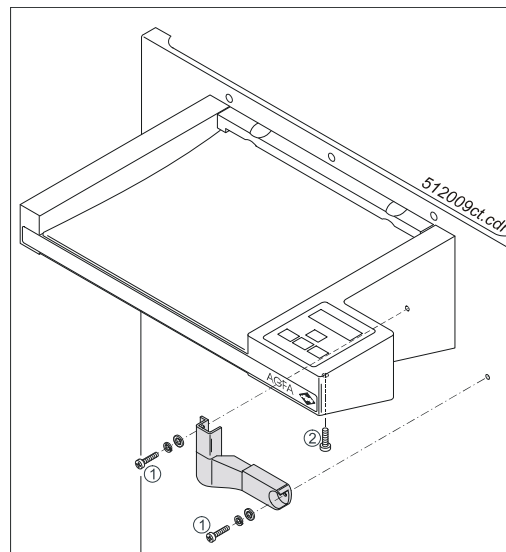


Figure 3: Bottom of the film feed table

3.1

Pasting over of the crevices beneath the film feed

1. Paste over the two crevices beneath the film feed with the enclosed light tight strips/black stickers (see figure 4).

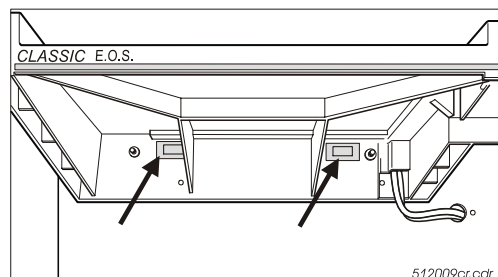
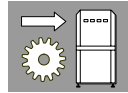


Figure 4: Light tight strips beneath the film feed




Light possibly penetrates the crevice, if the light tight strips are not pasted over.



4

Using the drilling templates

1. Attach the enclosed right drilling template (see figure 5).
Observe the mounting instructions on the label.
2. Drill a hole through the side panel of the feed table at the position marked with 
(drill \varnothing 6.0).

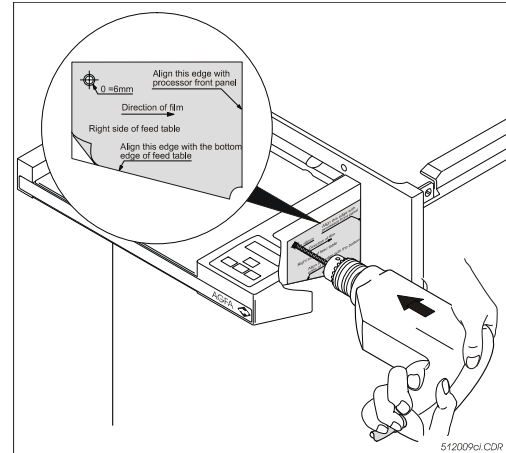



Figure 5: Right drilling template on the film feed table

3. Attach the enclosed left drilling template (see figure 6).
Observe the mounting instructions on the label.
4. Drill a hole through the side panel of the feed table at the position marked with 
(drill \varnothing 6.0).

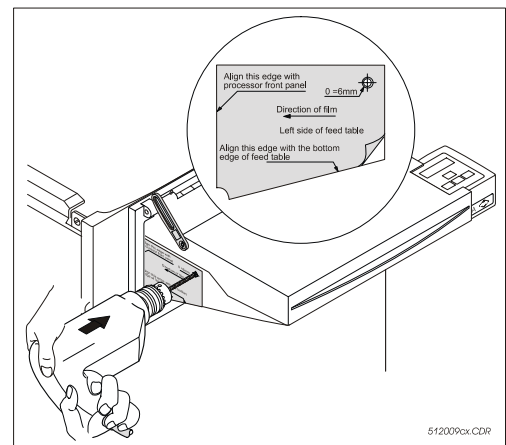
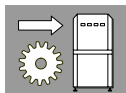


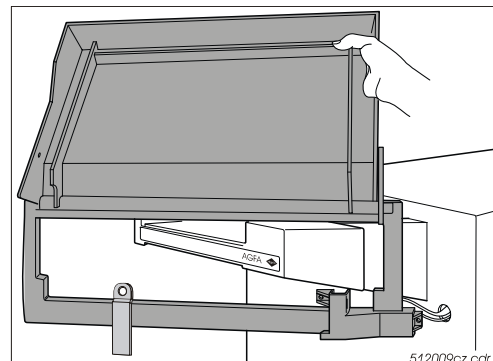
Figure 6: Left drilling template on the film feed table



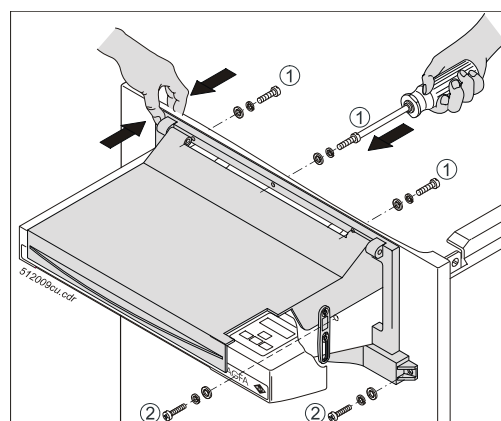
5

Mounting the light tight cover

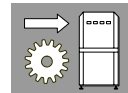
1. Tilt the light tight cover on the film feed table as shown in figure 7. Connect the light tight cover first above the display housing.

**Figure 7: Positioning of the light tight cover**

2. Mount the light tight cover by means of the three enclosed Phillips screws ①.
3. Mount the bottom of the light tight cover by means of the screws ② removed before.

**Figure 8: Upper screw connection**

If there is a light tight wall at the film feed table, a second person will be necessary for mounting the light tight cover.



4. Mount the bottom of the light tight cover on the left hand side by means of the delivered EJOT screw.

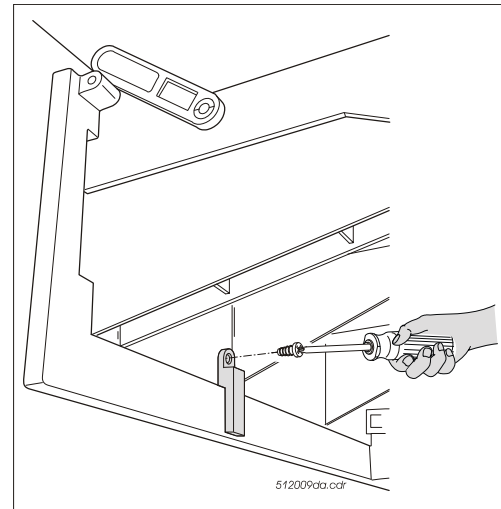


Figure 9: Left screw connection

6

Additional sealing of the display housing

1. Insert the enclosed seal from below into the provided recess of the display housing (see ① in figure 10).
The rib of the seal must be on the inside of the display housing.
2. Clamp the bottom plate of the display housing on the sealing rib (see ② in figure 10).
3. Press the bottom plate up.
4. Mount the bottom plate by means of screw ③ removed before.

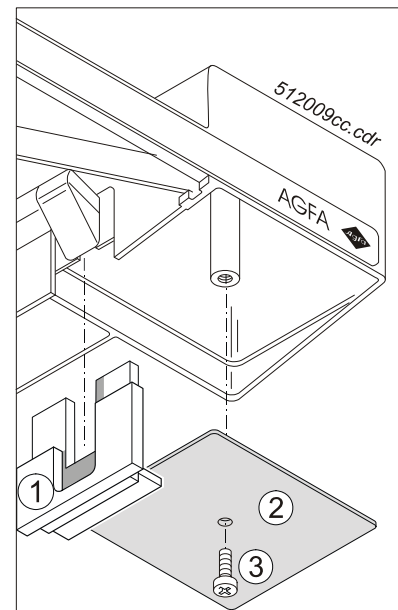
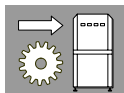


Figure 10: Positioning of the seal



The seal prevents light from leaking in.



7

Mounting the guide bracket on the light tight cover

1. Place the washer and the spring washer on the screw.
2. Slide the screw (A) through the previously drilled hole from the inside of the film feed table.

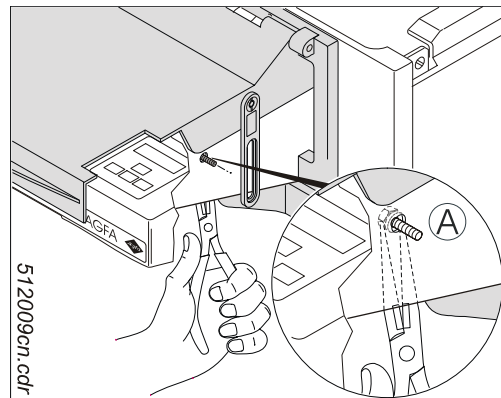


Figure 11: Positioning the screw



We recommend to use pliers to guide the screw (plus washer and spring washer) through the drill hole (see figure 11).

3. Mount the enclosed spacer bushing (B) on the screw from the outside (see spot in figure 12).

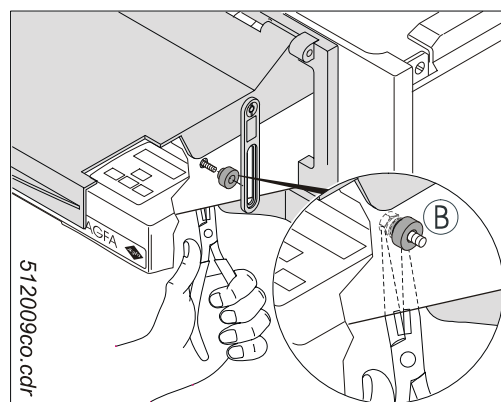
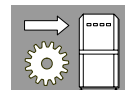



Figure 12: Positioning the spacer bushing



4. Insert the enclosed stud  through the recess of the guide bracket across the screw (see spot in figure 13).
5. Connect the stud and the screw (see figure 13).

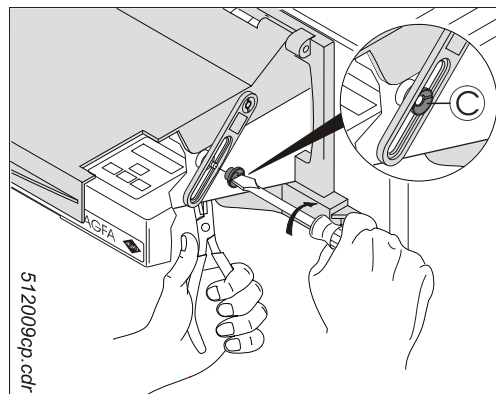


Figure 13: Guide bracket with screw connection



Install the guide bracket on the other side of the film feed table in the same way.

8

Completion of the modification

1. Insert the racks again.
2. Mount the machine cover.
3. Switch the machine back on.

Section 10

describes subsequent modifications in the machine resulting from technical changes.

Chapter 10: Intentionally left blank.

Section 11

contains an overview of all technical modifications. This refers to hardware as well as software modifications.

Chapter 11

Contents

| | |
|----------|--|
| 1 | Introduction of the Processor Software CLLC_1203 (CM+9 5270 9410 1) 1 |
|----------|--|

1 Introduction of the Processor Software CLLC_1203 (CM+9 5270 9410 1)

Introduction as production standard:

| | Type 5270 / 100 | Type 5270 / 105 |
|----------|-----------------|-----------------|
| as of SN | 4730 | 1138 |
| and | - | - |

Description:

The introduction of Processor Software CLLC_1203 solves dryer problems.

Section 12

describes all routines and tests necessary during maintenance.

Order No.: DD+DIS302.03E

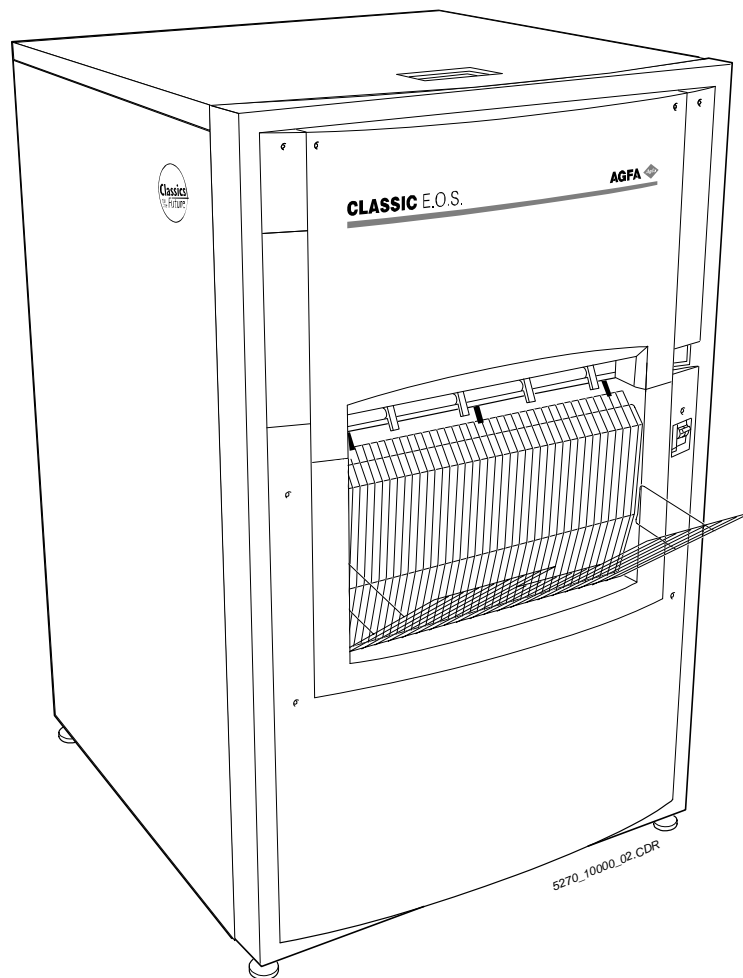


1 piece WACH4 MA 1

Classic E.O.S.
Type 5270 / 100
Classic E.O.S. CL
Type 5270 / 105

Maintenance Instructions

Internal Update #5



The Maintenance Instructions can also be ordered separately.

Order number: DD+DIS302.03E

Caution:

This system uses mains voltage. Please observe the pertinent safety instructions.

These instructions describe adjustments and routines, which must only be performed by qualified technical personnel.

Note:

Electrical repairs and connections must only be made by certified electricians.

Mechanical repairs and connections must only be made by certified technicians.

CE Declaration:

According to the medical directives the CE Declaration (CE Conformity) becomes void if the product is modified without permission of the manufacturer!

This applies to all parts, not only the safety devices!

We reserve the right to change data and characteristics in the light of technical progress.

Chapter 12

Contents

| | | |
|----------------------------|---|-----------|
| 1 | Safety..... | 1 |
| 1.1 | Safety check..... | 4 |
| 1.2 | Safety switches..... | 5 |
| 1.3 | Checking the function of the GFI switch 0FI..... | 6 |
| 2 | Required Tools and Maintenance Materials | 7 |
| 2.1 | Special tools | 7 |
| 2.2 | Auxiliary equipment | 7 |
| 2.3 | Lubricants | 7 |
| 2.4 | Cleaning instructions..... | 8 |
| 2.5 | Protection material | 8 |
| 2.6 | Spare parts kits..... | 9 |
| 2.7 | Cleaning substances: | 9 |
| 3 | Maintenance..... | 10 |
| 3.1 | Maintenance instructions | 10 |
| 3.1.1 | How to use the maintenance instructions | 10 |
| 3.1.2 | Maintenance procedure | 10 |
| 3.2 | Maintenance intervals | 11 |
| 3.3 | Analysis..... | 11 |
| 3.4 | Maintenance Preparations | 13 |
| 3.5 | Checking, cleaning, and general care | 15 |
| 3.6 | Cleaning the rack and tank systems..... | 21 |
| 3.7 | Functional test..... | 21 |
| 3.8 | End of maintenance | 22 |
| 4 | Machine Care by the Customer..... | 24 |
| Appendix: | | |
| Maintenance Checklist..... | | page 1-3 |

1

Safety**General safety instructions**

- The machine must only be used as described in the operating instructions. Any other use may result in damage to the machine, or may affect the machine function with the consequence that the machine can no longer be used as intended, and therefore presents a risk for patients, user and environment.
- The machine must only be operated by qualified personnel trained on the machine.
- Ensure that only trained personnel have access to the machine.
- Ensure that the machine can always be supervised and that any tampering is prevented.
- Repairs or modifications on the machine must only be performed by trained service personnel authorized by AGFA.
- In case of visible damage on the machine housing the machine must not be operated or used, and must immediately be disconnected from the mains.
- Built-in or external safety devices must not be circumvented or disabled.
- Disconnect the machine from the mains before starting any maintenance.
- If a mains connection is absolutely required these maintenance routines must only be made by specially trained personnel.
- Like all technical devices, this machine must be operated, cared for and serviced correctly as described in the documentation provided with the machine.
- If the machine is not operated correctly, or if it is not serviced correctly, AGFA will not be liable for any resulting disturbances, damage or injuries.
- When installing the machine make sure that either the mains plug or an all-cable disconnecting device is provided in the internal installation close to the machine and is easily accessible.
- If the machine is connected with other components or assemblies, AGFA will guarantee safety only for combinations which are approved by AGFA.
- In case of conspicuous smoke or noises, immediately disconnect the machine from the mains.

Special instructions for the handling of chemicals

- When handling chemicals, always observe the applying safety and environmental regulations, as well as the operating and warning instructions pertaining to these chemicals.
- Wear stipulated protective clothing and safety goggles.
- When disposing of chemicals and waste water, you must comply with the local regulations and the provisions for environmental protection.
- If photo-chemicals get in your eyes, proceed exactly according to the warning instructions and/or the instructions published by the manufacturers of the chemicals. If required, immediately rinse your eyes with cold water. Afterwards a physician must be consulted immediately.
- Avoid inhaling of chemical fumes. Make sure that there is sufficient

ventilation at the installation site of the machine, i.e. an air exchange that is at least ten times the room volume per hour.

- Always comply with the installation instructions.
- Verify tightness of all connections for chemicals and water, as well as waste water, on the machine in regular intervals. At least check whenever suggested in the operating instructions and/or service instructions.
- If solution gets into the inside of the machine (e.g. by spilling during tank filling), the machine must immediately be disconnected from the mains and cleaned thoroughly by the service personnel.
- Do not use additional chlorine or chlorine containing substances inside the processor. The use of additional chlorine or chlorine containing substances can lead to irreversible damage of the equipment. Using these substances may void the manufacturers warranty.

The film processor must not be operated in the direct vicinity of the patients as defined in EN60601-1 and IEC 601-1.



In addition to the safety regulations mentioned in this document the country specific safety regulations must be observed!



These maintenance instructions are to be considered confidential.

The instructions refer to the following components of the film processor:

- Film feed table
- Transport units
- Main drive
- Circulation pumps and their drive
- Dryer / IR-heaters
- Replenishment system
- Tank and hose system / tank heaters
- Water connections / water filter
- Electrical connection



Disconnect the machine from the mains before starting any maintenance and/or repair activities. If a mains connection is absolutely necessary this maintenance and repair work must only be made by specially trained personnel.

1.1

Safety check

**Electrical check**

- Check the power cable and the cables inside the machine for damage.
- Check the strain relief of the power cable.
- Check the line fuses for the required value.
- Check the function of the air filter and the cooling.
- Check the cable connections and plug for burnt spots.
- Check the grounding connections at the metal panels and housing.

Upon repairs regarding the mains voltage the protective earth must be checked (VDE standard). The resistance of the PE with an earthed pin connector is ≤ 0.3 Ohm, with a fixed connection it is ≤ 0.2 Ohm (according to VDE 0702, VBG4, Edition 1997).

- 1: Internal circuit of the machine to be tested
- 2: Measuring equipment for testing the protective earth resistance
- 3: Connection between meter and protective earth
- 4: Connection between meter and conductive parts which may be touched in the machine to be checked

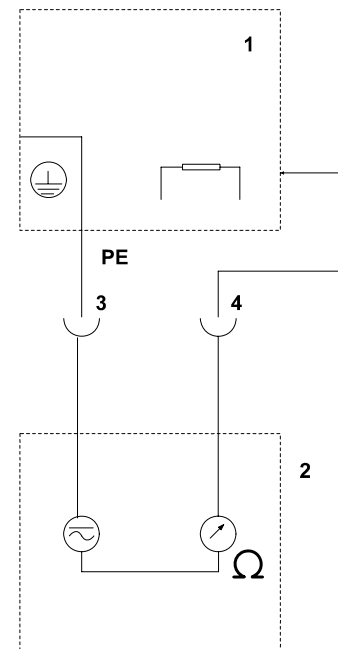


Figure 1



When measuring the resistance consider that the total value always includes the resistance of the measuring cable.

1.2

Safety switches

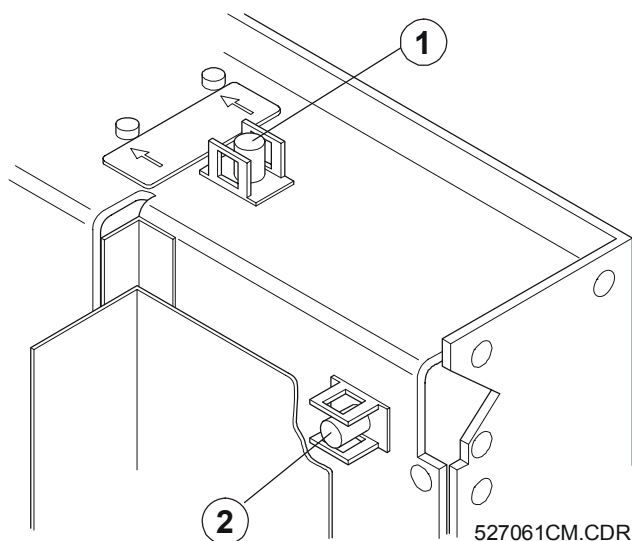


Figure 2

① = Safety switch (cover) 0SW2

② = Safety switch (dryer flap) 0SW3

To ensure safety of the customer the machine has two safety switches.



For service purposes the function of the safety cover switch can be overridden with a service key (locking pin CM+9042663090). However, be careful, there is a risk of injuries by moving mechanical or electrical parts.



Make sure to remove the locking pin before closing the covers.

Otherwise the cover switch may be damaged or the adjustment position is lost. The safety function for the customer is then no longer effective.



But even in case of interrupted safety switches 0SW2 ① and/or 0SW3 ② and with the mains switch 0SW1 (0S1) off, there is still power applied on the following components as long as the power cord is plugged in:

- Ground fault interrupter 0FI
- Mains switch 0SW1

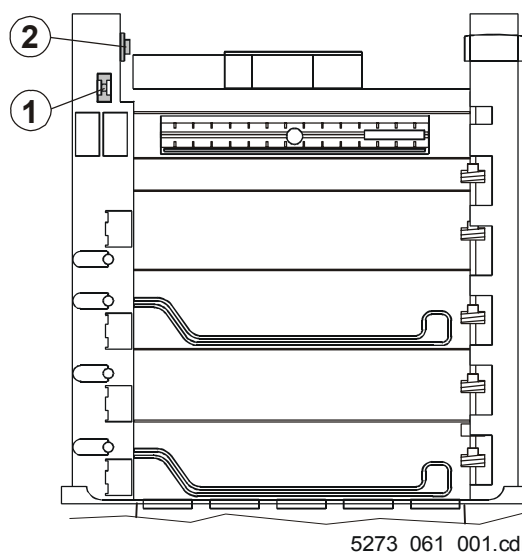


Figure 3

1.3

Checking the function of the GFI switch 0FI



A GFI switch: ($I_N = 30 \text{ mA}$ in compliance with VDE 664) is integrated in the machine.

Check the function of the ground fault interrupter (GFI switch).

- ① Press the button, this releases / deactivates the GFI switch!
- ② Activate the GFI switch by resetting the toggle switch.
(No automatic reset)

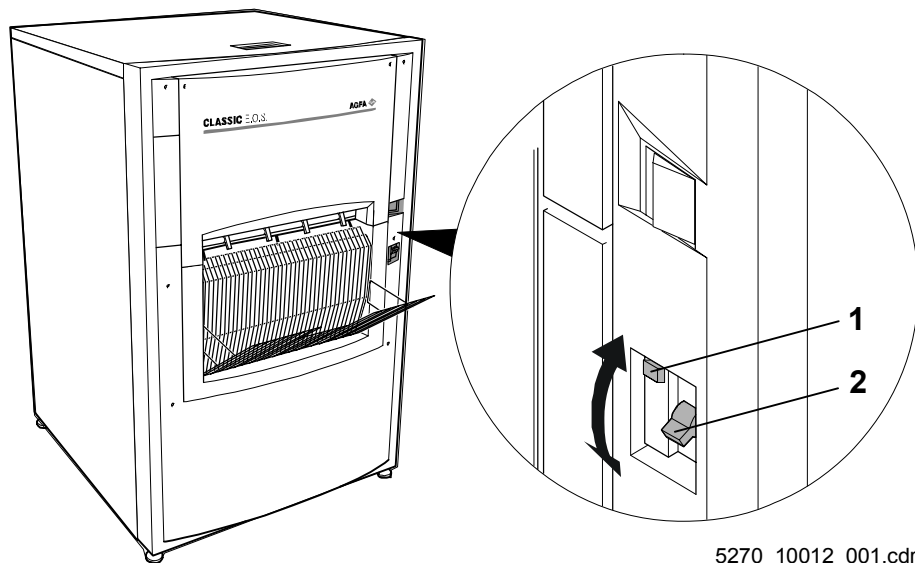


Figure 4



Information for the customer: This routine must be repeated 1x per month.



The machine must not be put in operation without an installed GFI switch!

2 Required Tools and Maintenance Materials

2.1 Special tools

In addition to the normal equipment the following tools are required:

| Order number | Tool description |
|------------------------|--|
| CM+9042663090 | Locking pin (service key, order two keys) |
| commercially available | Graduated beaker, 1000 ml (33.82 fl.oz.) |
| CM+9999902910 | Thermometer |
| commercially available | Bucket, 10 l (338.18 fl.oz.), with liter scale |
| commercially available | Hose with shower l = 4 m, with coupling for the water tap and shut-off tap |
| commercially available | Torch or hand lamp |
| commercially available | Soft dust brush |
| commercially available | Bottle brush |

2.2 Auxiliary equipment

| Order number | Designation |
|---------------|----------------------------|
| CM+9999992360 | Kresto hand washing lotion |
| CM+9999992310 | Plastic cleaner |
| CM+9999915240 | Cleaning sponge |

2.3 Lubricants

| Order number | Designation |
|---------------|---|
| CM+9999991360 | Ballistol oil |
| CM+9999992470 | Grease Isoflex Topas NB52 (50ml / 1.69 fl.oz) |

2.4**Cleaning instructions****SAFETY**

For cleaning the machine tanks make sure that the power plug of the machine is disconnected!

Before cleaning, the standard covers and panels must be put on all electrical components!

All cleaning substances may irritate the skin and the eyes. Therefore it is always necessary to use rubber gloves and protective goggles when mixing and using cleaning substances.

Follow the safety instructions of the manufacturer!

Splashes in the eyes or on the skin must be cleaned immediately with water.

During mixing of the cleaning powder avoid breathing of the powder dust.

The cleaning substances may attack the components, especially the rubber rollers. Therefore the reaction time should not exceed approx. 20 minutes. Thorough rinsing with water or neutralizing chemicals is required.

Do not use any spirit or alcohol to clean the rollers!

Disposal:

Always observe the regulations by the local authorities and the pertinent sewage protection laws when disposing of cleaning chemicals and water!

2.5**Protection material**

| Order number | Designation |
|---------------|-----------------------|
| CM+9999915040 | Protection gloves |
| CM+9999915050 | Protection goggles |
| CM+9999991550 | Protection cream |
| Buy locally | Work coat / jump suit |

2.6**Spare parts kits**

We recommend to carry the following parts kits*) for maintenance:

| Order number | Designation |
|----------------|-------------|
| CM+05270100731 | Repair |
| CM+05270100733 | Maintenance |

*) see general information about spare parts kits (Chapter 8)

2.7**Cleaning substances:**

| Order number | Designation | ABC Code |
|-------------------------|--|----------|
| Developer tank | | |
| CM+9999992250 | BIC EBAREN 86 Cleaner and Neutralizer | EBMBU |
| Fixer tank | | |
| CM+9999992840 | AGFA FIXCLEAN | 7352J |
| CM+9999992000 | BIC FIXAREN 80 | VSBRE |
| Water tank | | |
| CM+9999991930 | BIC ARGALEX 91 Cleaner and Neutralizer | VR76F |
| CM+9999992590 | BIC OXOCLEAN Water Tank Cleaner | 65D1Q |
| Anti-algae agent | | |
| CM+9999992260 | BIC ALGEFIN 86 A | WDQ02 |
| Anti-lime agent | | |
| CM+9999992840 | AGFA FIXCLEAN | 3752J |
| CM+9999992210 | BIC BIO PVC BECKEN CLEAN | V7W91 |

3 Maintenance

3.1 Maintenance instructions

3.1.1 How to use the maintenance instructions



All the points listed here (minimum maintenance points) must be carried out.

- The maintenance points have been arranged in a chronologically suitable order to make your work routines as efficient as possible.
- The sequence of the maintenance points in the checklist (see appendix) is identical with these maintenance instructions.
- “Test & Adjust” routines in the integrated service (as of Software CLLC 1107), which support the maintenance work are listed under “auxiliary equipment”.
- If there is a detailed description for certain maintenance points in the service documentation, this will be noted in the column “details”.
- During maintenance please observe the safety regulations in this chapter and in Chapter 6.1.

3.1.2 Maintenance procedure



- **For cleaning the machine tanks make sure that the power plug of the machine is disconnected!**
- **Before cleaning, the standard covers and panels must be put on all electrical components!**
- **Do not use chlorine or chlorine containing substances in the film processor. The use of chlorine or chlorine containing substances may cause irreparable damage in your film processor. Use of these substances may result in termination of the manufacturer’s warranty.**

3.2

Maintenance intervals

If SERVICE INDICATION has been activated in the SERVICE program, the operator will be reminded of a required maintenance according to the selected maintenance cycle.

If the maintenance is due, an alternating display of FILM and MAINTENANCE reminds you daily during the first three film feeds until the maintenance is actually made.

After maintenance this message is reset in the SERVICE program
<Service/Service Settings/Maintenance/Reset ServIndic>
(see Chapter 6.6), if <Service/Service
Settings/Maintenance/Service Indication/ On> is set.

The following maintenance cycles are recommended:

at least 4 maintenance jobs per year

(depending on various factors, as e.g.:

- less processing cycles,
- water quality (algae growth)
- extent and intensity of general care by the customer
- setup of the <Service Settings> (anti-algae)

The maintenance cycles must be entered in the SERVICE program
<Service/Service Settings/Maintenance/Service Interval>
(see Chapter 6.6).

3.3

Analysis

| Test points | Measures |
|--|--|
| Discussion with customer | <input type="checkbox"/> Discuss current problems with the customer. |
| Infocounter analysis to determine possible weak points | <input type="checkbox"/> The infocounter data can be listed directly on the machine display. <div style="text-align: center;"> <pre> graph TD AnyDisplay[Any Display] --> Settings[Settings] Settings --> Language[Language] Language --> Service[Service] Service --> InfoCounters[InfoCounters] InfoCounters --> DeviceInfo[Device Info] InfoCounters --> TestAdjust[Test & Adjust] InfoCounters --> ServiceSettings[Service Settings] InfoCounters --> InfoCounter[Info Counter] InfoCounter --> DeviceError[Device Error] InfoCounter --> Values[...] </pre> <p style="text-align: right;">5273_10012_003.cdr</p> </div> <p style="text-align: center;">Figure 5</p> |

| Test points | Measures |
|---|--|
| For analysis the following information in the InfoCounters menu must be evaluated: | <input type="checkbox"/> Device Info: Display of machine type and installed software version. Update the software if required. |
| | <input type="checkbox"/> Info Counter: Maintenance: MAINTENANCE shows the last 10 maintenance jobs and the corresponding preset maintenance cycles. DEV Repl. Liter: Display of the complete amount of replenished developer and the replenished amount since the last maintenance. FIX Repl. Liter: Display of the complete amount of replenished fixer and the replenished amount since the last maintenance. Film: Display of the complete amount of processed film and the processed film since the last maintenance in square meters. JOG Cycle: The film consumption of the last 10 days is displayed together with the date, the amount of film and the selected jog-cycle (ON-OFF-AUTO). Pump Calibr.: At this option the time of the respective pump calibration with the adjusted calibration rates and the adjustment mode (DEV/FIX) can be displayed. <input type="checkbox"/> Device Error: The (maximum) 100 last errors are recorded in plaintext together with date and time. <input type="checkbox"/> Error Hit List: The previously occurred errors are displayed sorted according to their occurrence frequency and with error number and list position. |



The Error hit list is the main basis for planning the maintenance work. Thereby the maintenance work concentrates on the components which caused the majority of problems.

The initial causes of problems are to be solved and damaged or worn components are to be replaced! (See Chapter 6.3)

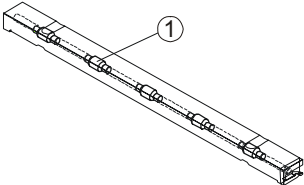
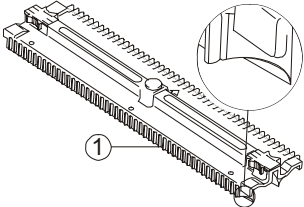

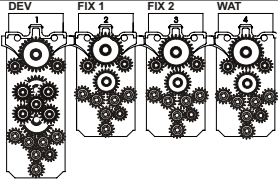


| Test points | Measures |
|-------------|---|
| | <input type="checkbox"/> Logbook: The actions of the machine are recorded after switching on and can be viewed here in plaintext together with date and time. |
| | <input type="checkbox"/> Runtime: Runtime shows the total number of operating hours. |

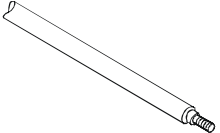
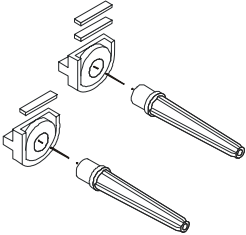
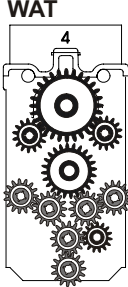

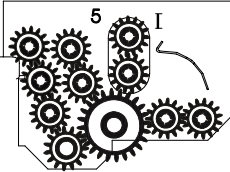

3.4

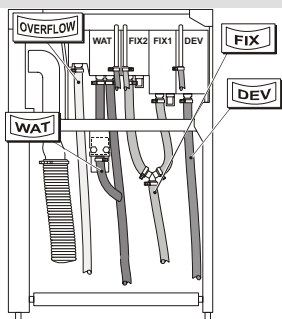
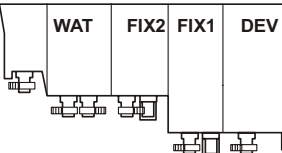
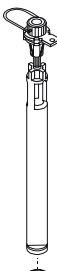
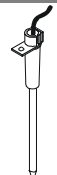
Maintenance Preparations

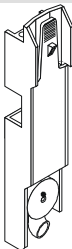

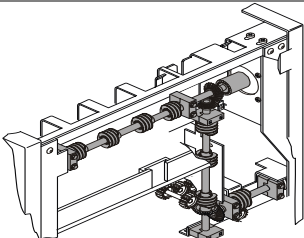

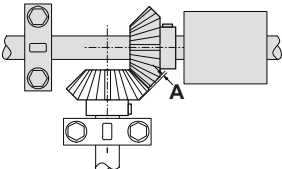
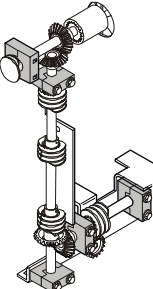
| Steps | Sub-steps |
|---|--|
| Disconnecting the machine from the mains | <ul style="list-style-type: none"> • Switch off the machine • Unplug the power plug |
| Remove covers and panels | <ul style="list-style-type: none"> • Remove machine cover and side panels |
| Drain tanks | <ul style="list-style-type: none"> • Open shut-off valves in developer, fixer, and water tank and drain the solutions |
| Remove racks | <ul style="list-style-type: none"> • Remove racks with guides from the tanks |


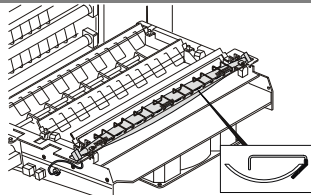
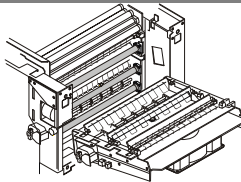
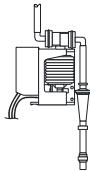
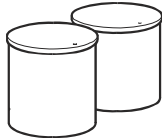
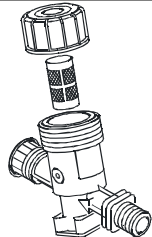
3.5 Checking, cleaning, and general care

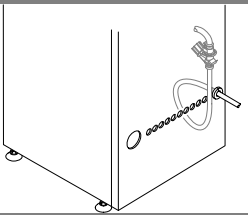
| | Module | Check | Cleaning and care | Tools | Details |
|--|--|--|---|----------------------|------------|
|  | Film scanner rollers Scanning rollers with antistatic hose (1) | <ul style="list-style-type: none"> • for smooth turning • for centered hose position on the roller • for cracks in the hose surface | <ul style="list-style-type: none"> • if dirty clean carefully under running water | - | - |
|  | Rack guides Guide fingers (1) | <ul style="list-style-type: none"> • for a smooth surface of the guide fingers | <ul style="list-style-type: none"> • if dirty clean carefully under running water | Sponge | Chapt. 6.5 |
| <div>  Handle the rack guides with care to avoid scratches and damage. </div> | | | | | |
|  | Rack system Water, fixer, and developer racks | <ul style="list-style-type: none"> • for smooth operation | <ul style="list-style-type: none"> • for cleaning remove the panels on the rack drive side | Screwdriver | Chapt. 6.5 |
| <div>  Gears are only plugged on but not secured. Handle the racks in such a way that the gears stay in position. </div> | | | | | |
|  | Gears | <ul style="list-style-type: none"> • the tooth faces and gear meshing | <ul style="list-style-type: none"> • use a bottle brush or sponge to clean from deposits • replace defective parts if necessary | Bottle brush, sponge | Chapt. 6.5 |

| | Module | Check | Cleaning and care | Tools | Details |
|--|---|---|--|--------------------------------|---------|
|  | Rollers / shafts Bearings without springs | <ul style="list-style-type: none"> roller surfaces / bearings / shafts for wear and smooth operation axial play of the rollers | <ul style="list-style-type: none"> if dirty clean carefully under running water | Sponge cleaning agent | - |
|  | Bearings with springs | <ul style="list-style-type: none"> bearings / spring for wear roller pressure | <ul style="list-style-type: none"> replace defective parts | - | - |
|  | Water rack | <ul style="list-style-type: none"> shaft / bearing and drive for lime deposits | <ul style="list-style-type: none"> cleaning with "BIC BIO-PVC BECKEN CLEAN" possible if necessary, apply concentrated cleaner on the gears, allow to soak and then rinse with water for shafts and bearings prepare a cleaning bath | BIC BIO PVC BECKEN CLEAN | - |
| <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> Gears are only plugged on but not secured. Handle the racks in such a way that the gears stay in position. </div> </div> | | | | | |
|  | Distributor rack | <ul style="list-style-type: none"> for smooth operation tooth faces / axial clearance. roller surface (especially the foam roller) for wear and contact pressure shaft bearing for wear rollers for dirt | <ul style="list-style-type: none"> only clean the distribution rollers carefully in case of visible dirt using a soft sponge | Sponge | - |
| <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> Avoid the contact of grease on the surface of the rollers. </div> </div> | | | | | |

| | Module | Check | Cleaning and care | Tools | Details |
|---|---|---|--|--------------------------|---------|
|  | Tank and hose system Drain + overflow pipes | <ul style="list-style-type: none"> • for leaks / tightness of the system • hose clamps for tight connection • hoses for algae growth and dirt deposits | <ul style="list-style-type: none"> • replace very dirty or very old parts | - | - |
|  | Developer, fixer, and water tanks | <ul style="list-style-type: none"> • for dirt deposits and algae growth | <ul style="list-style-type: none"> • clean the tanks with sponge, water, or tank cleaner and then rinse thoroughly with water | Sponge cleaning agent | - |
|  | Tank shut-off system | <ul style="list-style-type: none"> • system for tightness • O-rings for perfect condition | <ul style="list-style-type: none"> • replace defective O-rings if necessary | - | - |
|  | Level sensors / temperature sensor | <ul style="list-style-type: none"> • for dirt deposits and algae growth | <ul style="list-style-type: none"> • remove deposits from the electrodes | Sponge | - |


| | Module | Check | Cleaning and care | Tools | Details |
|---|--|---|--|---|------------|
|  | Circulation pumps Pump ducts | <ul style="list-style-type: none"> for dirt and crystalline deposits | <ul style="list-style-type: none"> clean pump ducts / pump housing / pump rotor thoroughly under running water using a brush replace if very dirty | Brush | - |
|  | Upon assembly, the magnet of the pump rotor must face the outer tank wall when the pump duct is inserted! | | | | |
|  | Drive shafts | <ul style="list-style-type: none"> worm gear faces / gear meshing | <ul style="list-style-type: none"> clean carefully using a damp sponge lubricate the worm drive slightly | Sponge Cleaner Isoflex Topas NB52 | - |
|  | Liquid on the Control Board and in the electronic section must be avoided. | | | | |
|  | Bevel gears | <ul style="list-style-type: none"> for play (max. 0.5 mm) | adjust the bevel gears if necessary | - | Chapt. 6.5 |
|  | Drive shaft bearings | <ul style="list-style-type: none"> for wear | replace bearings if necessary | - | - |

| | Module | Check | Cleaning and care | Tools | Details |
|---|--|---|--|---------------|---------|
|  | Coupling unit to drive motor | <ul style="list-style-type: none"> for complete connection | | - | - |
|  | Dryer Infrared heater, reflector, crossflow fan, convection heater | <ul style="list-style-type: none"> if the glass body of the infrared heater is undamaged reflector for dirt “film guides” (wire) | <ul style="list-style-type: none"> remove the dust with a soft brush | Brush | - |
|  | Dryer rollers | <ul style="list-style-type: none"> dryer rollers for dirt | <ul style="list-style-type: none"> only clean with a damp cloth where dirt is visible | - | - |
|  | Replenishment system | <ul style="list-style-type: none"> check for tightness filter on replenisher pump for dirt | <ul style="list-style-type: none"> replace the filter if necessary | - | - |
|  | Replenisher tanks | <ul style="list-style-type: none"> for dirt in replenisher tanks | <ul style="list-style-type: none"> rinse if necessary | Brush, sponge | - |
|  | Water supply Water filter / solenoid valve | <ul style="list-style-type: none"> filter insert for dirt connections on the solenoid valve for tightness | <ul style="list-style-type: none"> clean filter with a brush under running water | Brush | - |

| | Module | Check | Cleaning and care | Tools | Details |
|---|-----------------------|---|---|-------|---------|
|  | Water pressure hose | <ul style="list-style-type: none">• for tightness / sharp bends / cracks due to aging | <ul style="list-style-type: none">• replace the hose if necessary | - | - |
| | Electrical connection | <ul style="list-style-type: none">• all connections for tightness | | - | - |

3.6

Cleaning the rack and tank systems

| Steps | Sub-steps |
|---|--|
| Preparing racks and tanks | <ul style="list-style-type: none"> • Mount the rack covers. • Insert the racks without the guides. • Close the tanks. • Fill the tanks with water and the respective cleaning agent. • Put the machine in operation. |
|  | Make sure to observe the safety instruction regarding the handling of chemicals! See Chapter 1. |
| Cleaning and checking for tightness | <ul style="list-style-type: none"> • Call up the cleaning mode in the service program <Service Settings / Cleaning Mode>. • Check the hose and tank system for tightness. • The cleaning mode finishes after approx. 20 minutes. • Switch off the machine and unplug the connection to the mains. • Dispose of cleaning substances in compliance with local regulations. • Open the tanks and drain them. • Take out the racks with guides. • Rinse tanks and racks thoroughly with fresh water. |

3.7


Functional test

| Steps | Sub-steps |
|-----------------------|---|
| Start operation | <ul style="list-style-type: none"> • Insert the racks. • Close the tanks. • Put the machine in operation (see Chapter 3). |
| Check the rack drives | <ul style="list-style-type: none"> • Check meshing of worm gears, main drive and gears of the rack system. |
| Check the circulation | <ul style="list-style-type: none"> • Check if LEDs of the synchro-motors are on. • Check circulation of the solutions – movement on solution surface. |
| Replenishment pumps | <ul style="list-style-type: none"> • Calibrate the replenishment pumps (see Chapter 3). • Calibrate the developer pump first and then the fixer pump. |

| Steps | Sub-steps |
|-------------------------------|---|
| Water replenishment >3l/min | <ul style="list-style-type: none"> Take out the supply elbow and collect the water in a graduated beaker. Call up the menu <Test and Adjust / Test Output / Others/ Water Supply> and the water valve will be triggered for 10s. Check if the water rate is > 0.5l. |
| Insert the guides | <ul style="list-style-type: none"> Mount the guides on the racks – watch numbering on racks and guides! |
| Check the dryer and transport | <ul style="list-style-type: none"> Feed several test films. Check drying of the test films. Check for smooth film transport through the machine. |
| Film scanner rollers | <ul style="list-style-type: none"> Call up the menu <Test and Adjust/ Test Input / Scanners>. Feed film. Check the function of the scanner rollers. |
| Check the processing quality | <ul style="list-style-type: none"> Process test wedges and check the results. |

3.8

End of maintenance

| Steps | Sub-steps |
|---|--|
| Close the machine | <ul style="list-style-type: none"> Connect all ground connections and mount all the side panels. |
|  | <p>Splashes on the panels caused by photo chemicals / cleaning chemicals must be removed immediately if possible.</p> <p>When they dry they cause stains which are very hard to get off.</p> <p>To clean the panels only use water and common household cleaners (without solvents!).</p> |
| Feed test films | <ul style="list-style-type: none"> Run a test with all the film sizes and using all operating modes! |

| Steps | Sub-steps |
|-----------------------------------|---|
| Reset the service interval | <ul style="list-style-type: none">• Call up the menu <Service Settings / Maintenance / Reset Servindic. > and confirm with YES.• Check the Service indicators in menu <Service Settings / Maintenance / Service Indic. / Service Indikat. / ON>. |
| Reset the infocounters | <ul style="list-style-type: none">• When leaving the Service program <Service/InfoCounters /Info Counter/Clear TMPcountr.> confirm with YES. |

4

Machine Care by the Customer



The customer must be informed that regular cleaning and care is necessary in a film processor.



For an exact description of the cleaning and care jobs refer to the Operation Manual.

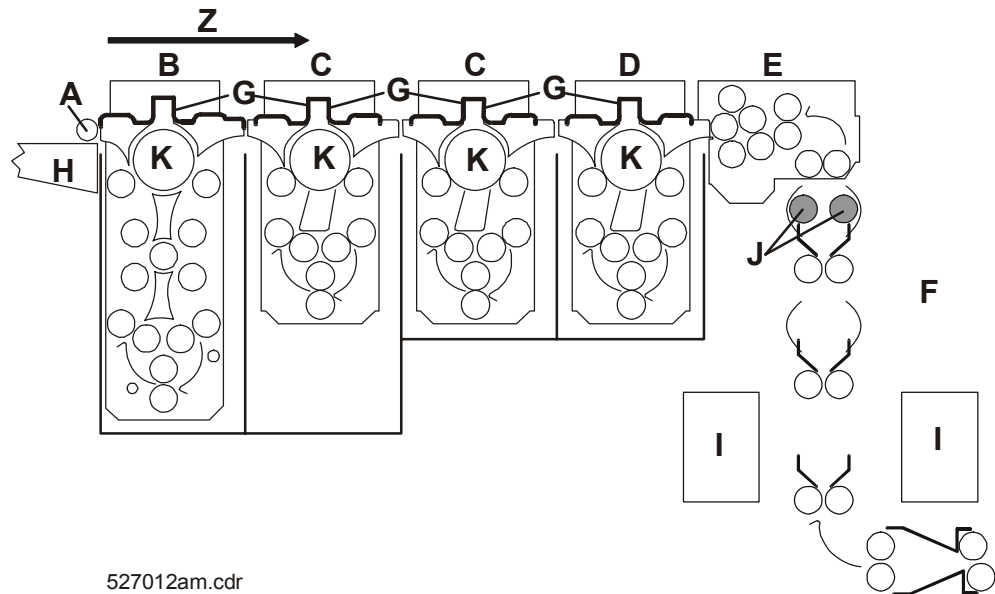


Figure 6

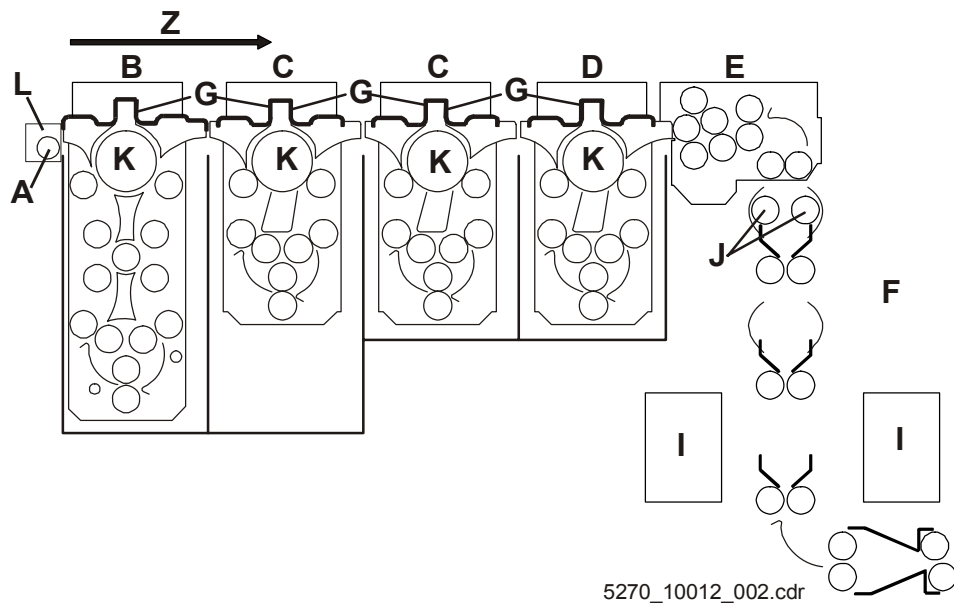


Figure 7

| | | | |
|----------|----------------------------------|----------|--|
| A | Film scanner rollers | G | Upper rack guides (crossovers) |
| B | Developer tank / developer rack | H | Film feed table |
| C | Fixer tank 1, 2 / fixer rack 1,2 | I | Dryer: Cross flow fan Convection heater |
| D | Water tank / water rack | J | Dryer: IR-heaters |
| E | Distribution rollers | K | Racks: central roller / main drive |
| F | Dryer | Z | Film transport direction |

| Interval | Action (care) |
|----------------|---|
| Daily | Clean the film feed table (H) daily with a damp cloth or a soft sponge, and then dry it. |
| Weekly | Rinse the upper rack guides (G) with warm water. |
| Every 3 months | Clean the distribution rollers (E) with a damp sponge. Rinse the circulation pumps of all tanks (B, C, D) under running water. Clean the transport rollers of the dryer (F) with a damp sponge. |
| Every 6 months | Clean the water filter. |

Classic E.O.S./ Classic E.O.S. CL

Type 5270/ 100/ 105

Work Instruction for order no.

SN

**Maintenance must be carried out according to the maintenance instructions
DD+DIS302.03E**

Remarks (by the customer):

INFO Logbook and/or Device Error *)

| Problem | Number of occurrences (date) |
|---------|------------------------------|
| | |
| | |
| | |
| | |
| | |

*) Listing of the error messages since the last maintenance:



By evaluating the “infocounter” information the main focus for the upcoming maintenance can be determined.

INFO consumption and/or infocounter consumption

| | Total | since last deletion |
|-----------------------|-------|---------------------|
| FILM developed | | |
| Developer consumption | | |
| Fixer consumption | | |

| Cleaning | | OK | n. OK |
|---|--|----|-------|
| Film scanner rollers | Clean only if dirty | | |
| Rack / guide units (crossovers) | Clean and rinse carefully | | |
| Gears | Clean and rinse carefully | | |
| Level sensors | Check for dirt, clean | | |
| Drive shafts | Check for dirt, clean | | |
| Tanks / drain hoses | Check the developer / fixer for crystalline deposits and check the water tank for algae growth; drain the tank and clean it. | | |
| Circulation pumps dev./fix./water | Check for dirt, clean | | |
| Dryer rollers | Clean with damp sponge | | |
| IR-heaters, reflector plates / cross-flow fan | Remove all dust with a soft brush. | | |
| Distribution rollers | Clean with damp sponge | | |
| Replenisher tanks | rinse if necessary | | |
| Water supply solenoid valve / filter | Check / clean | | |
| Chemicals | Mix fresh solutions. | | |

| Check the wear parts | | OK | n. OK |
|--|---|----|-------|
| Film scanner rollers | Check for smooth operation, check hose for cracks and position. | | |
| Transport units | for smooth operation | | |
| Gears | Check the axial play / check general condition. | | |
| Rollers / shafts / bearings with springs | Check for wear, uniform drive, and pressure. | | |
| Distribution rollers | for smooth operation | | |
| Rack guide units (crossovers) | Check for smooth surface. | | |
| Drive shafts | | | |
| Worm shaft / worm gears | Check the gear meshing and lubricate the worm shafts. | | |
| Bevel gears | Check for play | | |
| Bearings | Check for wear | | |
| Coupling unit | Check the connection. | | |
| Circulation pumps | | | |
| Function in dev./fix./water | Check for noises / crystalline deposits / algae growth | | |
| Solution circulation | Check the surface movement on the tanks. | | |
| Dryer | Check film drying. | | |
| IR-heaters | Check the function / check glass body for discoloring. | | |
| Reflector plates, film guide units | Check visually and clean if necessary. | | |
| Replenishment system | | | |
| Replenishment rate | Check the NOMINAL values by measuring. | | |
| Replenishment pump, stop valve | Check | | |
| Filter on pump | Check / replace if necessary | | |

| Functional test | | OK | n. OK |
|--|---|----|-------|
| Developer temperature | Compare NOM / ACT temperature and adapt | | |
| Fixer temperature, 34°C, fixed | NOM temperature in fixer tank reached? | | |
| Film drying | Check if films are sticking. | | |
| Dryer step setting | Check the clock and the brightness. | | |
| Transport function in wet / dryer section | Feed film and watch the transport. | | |
| Film scanner rollers | Check in the SERVICE program. | | |
| Processing quality | Check | | |
| Circulation pump drive – synchro motors (left hand machine side) | Red pilot lamps are on | | |

| Safety check | | OK | n. OK |
|---|---|----|-------|
| Tank and hose system | Check for leaks. | | |
| Tank shut-off system | Check for leaks / tightness. | | |
| Hose connections | Check | | |
| Water drain / overflow (algae growth) | Check for beginning clogging, clean if necessary. | | |
| Level detection | Check, clean if necessary / check the position in the mounting plate. | | |
| Water connections | | | |
| Check the filter / water supply solenoid valve. | Clean | | |
| Water supply rate | Check | | |
| Water high pressure hose | Check for good condition. | | |

| Check for electrical safety | | OK | n. OK |
|---|---|----|-------|
| Electrical connection | | | |
| Terminal strip XK1 on PCB1 (GS1) | Check and tighten the screw connections if necessary. | | |
| Condition of the electric cables and the mains plug | Check | | |
| Plug connections / ground connections | Check for tight connection. | | |
| Cover switch | Check (electrically and mechanically). | | |

| Options and Accessories | | OK | n. OK |
|-------------------------|-----------------|----|-------|
| Integrated accessories | Functional test | | |

| End of maintenance | | OK | n. OK |
|--------------------|--|----|-------|
| End of maintenance | Check if all ground connections are plugged in. | | |
| | Check the function with film. | | |
| | Delete infocounters | | |
| | Start a new maintenance cycle in <Service / Service Settings / Maintenance / Reset ServIndic>! (otherwise the service request will not be cleared) | | |

Date / Signature Service Engineer:

Customer

Copyright © 03.2004 DD+DIS302.03E Agfa-Gevaert AG
All rights reserved

Published by

Agfa-Gevaert AG
Fototechnik
Tegernseer Landstraße 161
D - 81539 München

Misprints, errors, and technical modifications reserved

AGFA and the Agfa-Rhombus are trademarks of Agfa-Gevaert AG, Germany

Section 13

contains the Fieldservice Bulletins, this is urgent and important information (usually on individual sheets) e.g.:

- Errors with safety aspects
- Errors in the series which can be restricted to a certain time or batch
- Special logistic actions

Order No.: DD+DIS157.04E



1 piece WVX7U MA 1

Classic E.O.S.

Type 5270 / 100 / 105

| Urgency | Reason | Subject |
|---|--|---|
| <input type="radio"/> immediately | <input type="radio"/> Safety | <input type="checkbox"/> Cure for Complaint (PowerHelp) |
| <input type="radio"/> Next service | <input type="radio"/> Reliability | <input type="checkbox"/> Problem may concern all devices |
| <input checked="" type="radio"/> In case of failure | <input checked="" type="radio"/> Quality improvement | <input type="checkbox"/> Problem depending on serial number / batch |
| <input type="radio"/> As required | <input type="radio"/> Functional changes | <input checked="" type="checkbox"/> New spare part |
| | <input type="radio"/> Compatibility | |

Control Board PCB1 (CM+9 5270 9450 0) and Processor SOFTWARE CLLC1107 (CM+9 5270 9410 0) available as Spare Part



This document describes the functions of Control Board PCB1 and Processor Software CLLC1107 as well as the features different to the previous version.



- For an overview of valid FSBs refer to the order list, see MedNet - GSO Library.

1 Control Board PCB1 (CM+9 5270 9450 X)

Subject

With order number CM+9 5270 9450 X we introduce the PCB1 as successor of CM+9 8405 6940 X.

This board is not a successor for Control Board CM+9 5270 7850 X.

- (1) For the installation of Control Board CM+9 5270 9450 X observe the following table:

| Machine | Type | Production standard as of SN |
|----------------|------------|------------------------------|
| Classic E.O.S. | 5270 / 100 | 4500 |
| Classic E.O.S. | 5270 / 105 | 1500 |



Scope of delivery:

- Control Board pre-assembled in the screening plate, **including**
 - **software for the Film Processor IC50 / IC51 Version CLLC1107**
 - **clock chip IC-CMOS-DS 12887**
 - **PLD programmed IC88 V1001**
- Enclosure for Control Board DD+DIS344.03DEF



The following spare parts can also be ordered individually:

| Designation | Order number |
|--|------------------|
| • Software for film processor IC50 / IC51 Version CLLC1107 | CM+9 5270 9410 X |
| • Clock chip IC-CMOS-DS 12887 | CM+9 0441 7030 X |
| • PLD programmed IC88 V1001 | CM+9 5270 7717 X |



Required time:

1 h



Required tools:

- Phillips screwdriver size 2, magnetic
- IC extraction tool CM+9 9999 1005 0
- Grounding strap CM+9 9999 0830 0

1.1

New functions

The installation of Control Board CM+9 5270 9450 X **together with the Processor Software CLLC1107 included in the shipment** offers the following additional functions:

- Level of fixer2 can be monitored individually.

Condition is:

- a level sensor present in the fixer2 tank and ST76 plugged

- The circulation pumps can be monitored individually.

Condition is:

- modified cable connections
(as of SN 4500 for Type 5270 / 100 and as of SN 1500 for Type 5270 / 105)

There are not plans for a modification of these cable connections in the field.

1.2

Compatibility



Control Board CM+9 5270 9450 X can only be installed in the machines in combination with the Processor Software CLLC1107 which is included in the shipment.

Control Board CM+9 5270 9450 X covers all functions of the previous version CM+9 8405 6940 X.

1.3

Optical features for differentiation

Predecessor and successor boards can easily be distinguished by the following features:

- **Reset switch (S1)** – modified layout
- **Clock chip (IC52)** – different position
- **ST80 = ST88** – different position and designation

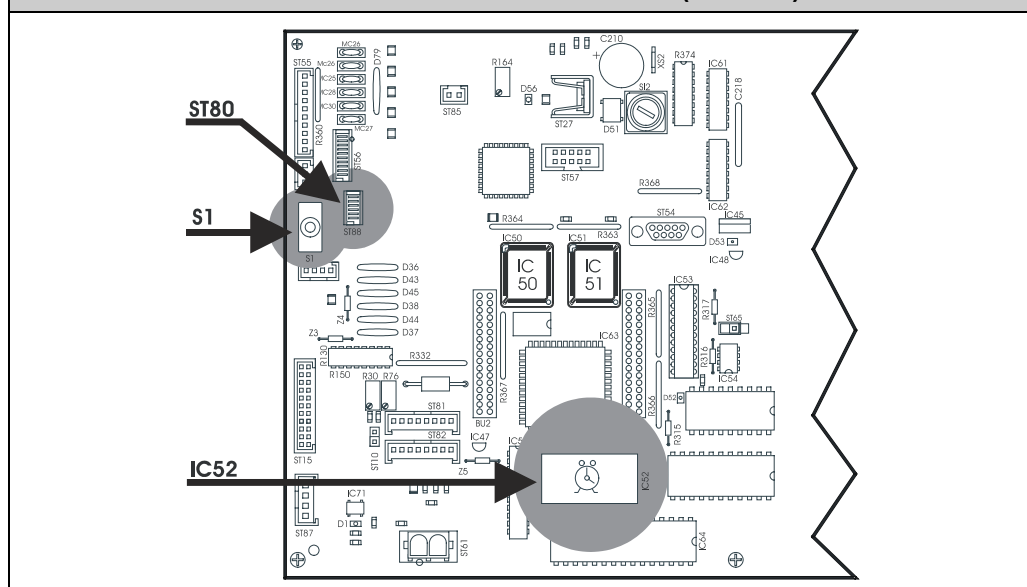
Predecessor: Control Board CM+9 8405 6940 X (section)

Figure 1

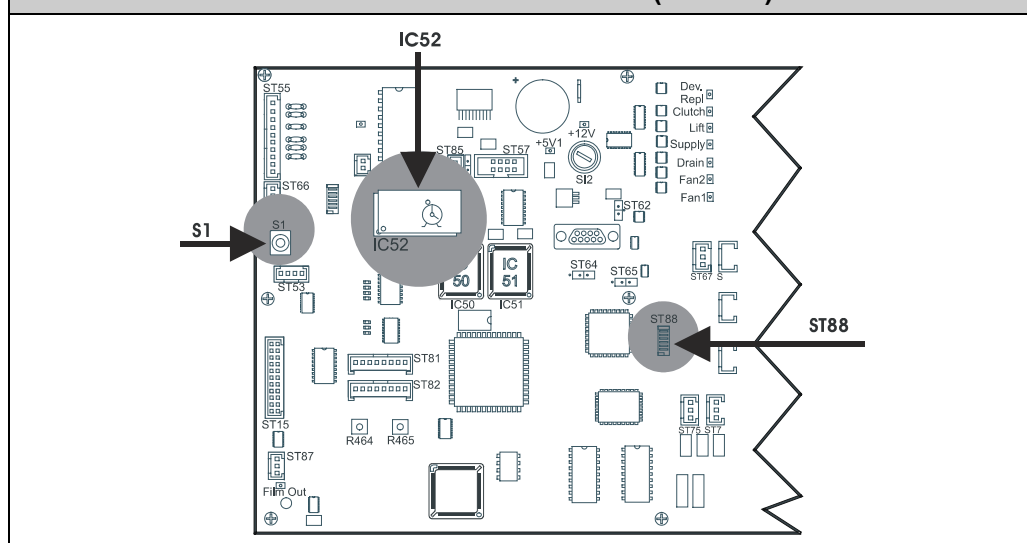
Successor: Control Board CM+9 5270 9450 X (section)

Figure 2

2

SOFTWARE CLLC1107 – CM+9 5270 9410 X



Scope of delivery:

- Software set of IC50 / IC51 Version CLLC1107
- Enclosure DD+DIS278.03DEF



Required time:

½ h



Required tools:

- IC extraction tool CM+9 9999 1005 0
- Grounding strap CM+9 9999 0830 0

2.1

New functions

- Level of fixer2 can be monitored individually.

Condition is:

- a level sensor present in the fixer2 tank and ST76 plugged

- The circulation pumps can be monitored individually.

Condition is:

- modified cable connections

(as of SN 4500 for Type 5270 / 100 and as of SN 1500 for Type 5270 / 105)

There are not plans for a modification of these cable connections in the field.

2.2

Compatibility



Processor Software CLLC1107 can only be installed in Control Board CM+9 5270 9450 X.

Control Board CM+9 5270 9450 X covers all functions of the previous version CM+9 8405 6940 X.

Order No.: DD+DIS249.04E



1 piece W1YZR MA 1

Classic E.O.S.

Type 5270/100
as of SN 4500

Classic E.O.S. CL

Type 5270/105
as of SN 1500

| Urgency | Reason | Subject |
|--|--|---|
| <input type="radio"/> Immediately | <input type="radio"/> Safety | <input type="checkbox"/> Cure for Complaint (PowerHelp) |
| <input type="radio"/> Next service | <input type="radio"/> Reliability | <input type="checkbox"/> Problem may concern all devices |
| <input checked="" type="radio"/> In case of failure | <input type="radio"/> Quality improvement | <input type="checkbox"/> Problem depending on serial number / batch |
| <input type="radio"/> As required | <input checked="" type="radio"/> Functional changes | <input checked="" type="checkbox"/> New spare part |
| | <input type="radio"/> Compatibility | |

**Introduction of
Processor Software CLLC_1203
Order Number: CM+9 5270 9410 1
Control Board PCB1 incl. CLLC_1203
Order Number: CM+9 5270 9450 1**



- The introduction of Processor Software CLLC_1203 solves dryer problems.
- Change the software only in case of problems.
- Replace the Control Board PCB1 only in case of problems with the control board.



- For an overview of valid FSBs refer to the order list, see MedNet - GSO Library.

Error symptoms After switching from any dryer level to step 2 there is no drying effect.

Remedy The solution for this problem is integrated in Software Version CLLC_1203.

1 Software CLLC_1203 (CM+9 5270 9410 1)



Scope of delivery:

- EPROM IC 50 CLLC_1203
- EPROM IC 51 CLLC_1203
- Enclosure (DD+DIS205.04D/E/F)



Required tools:

Large screwdriver

Extraction tool for ICs in PLCC housings CM+9 9999 1005 0

Grounding strap CM+9 9999 0830 0



Required time:

0.5 h

Software CLLC_1203 CM+9 5270 9410 1 has been installed in production machines as of the following serial numbers:

| Machine | Type | Serial Number SN |
|-------------------|-----------------|------------------|
| Classic E.O.S. | Type 5270 / 100 | as of 4730 |
| Classic E.O.S. CL | Type 5270 / 105 | as of 1500 |

Compatibility



Processor Software CLLC_1203 must only be used on the Control Board PCB1 CM+9 5270 9450 X.

This control board is installed in the Classic E.O.S. series (Type 5270/100) as of SN4500 and in the Classic E.O.S. CL series (Type 5270/105) as of SN1500.

Software CLLC_1203 must never be installed in the Control Boards GS1 CM+9 5270 7830 X, CM+9 5270 7850 X, CM+9 5270 7960 X.

The control boards can easily be distinguished by the following features:

- **Reset switch (S1)** – modified layout
- **Clock chip (IC52)** – different position

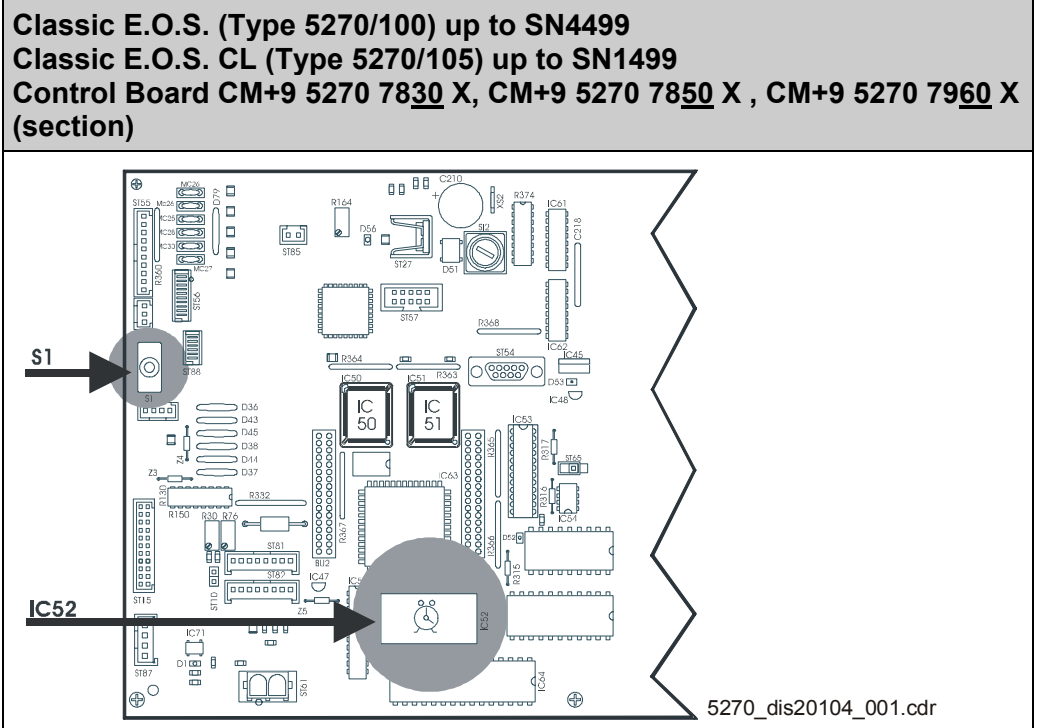


Figure 1

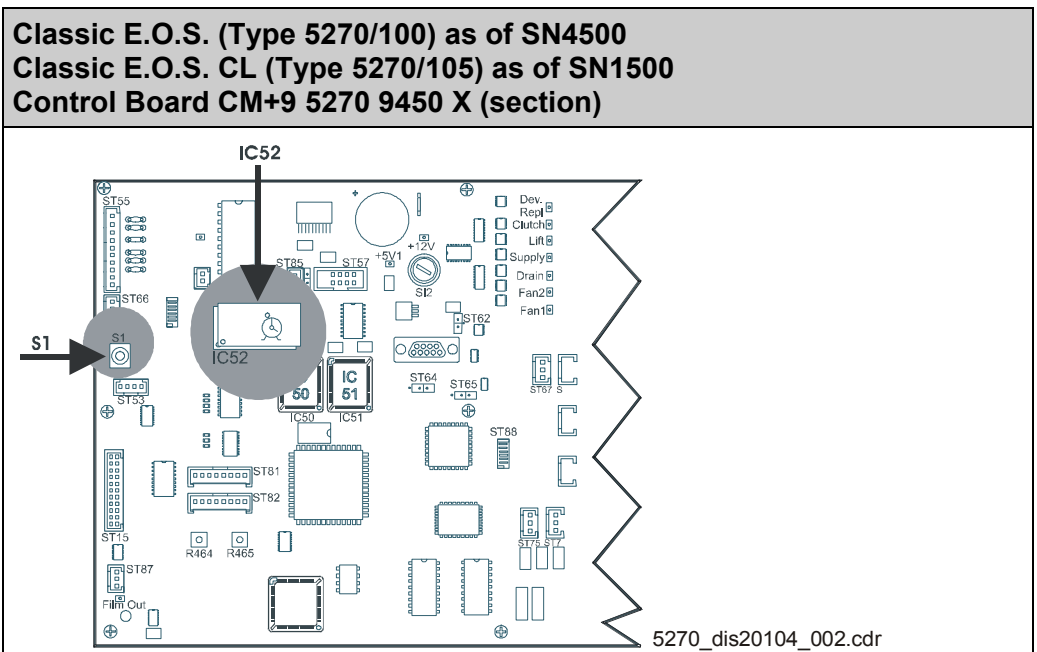


Figure 2

2

**Control Board PCB1 incl. CLLC_1203
(CM+9 5270 9450 1)**

Scope of delivery:

- Control Board pre-assembled in the screening plate, including
 - software for the Film Processor IC50 / IC51 Version CLLC_1203
 - clock chip IC-CMOS-DS 12887
 - PLD programmed IC53 V1001
- Enclosure for the Control Board DD+DIS206.04D/E/F



Required time:

1 h



Required tools:

- Large screwdriver
- Phillips screwdriver size 2, magnetic
- Grounding strap CM+9 9999 0830 0

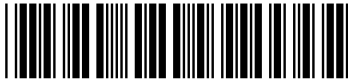
Control Board PCB1 CM+9 5270 9450 1 has been installed in production machines as of the following serial numbers:

| Machine | Type | Serial Number SN |
|-------------------|-----------------|------------------|
| Classic E.O.S. | Type 5270 / 100 | as of 4730 |
| Classic E.O.S. CL | Type 5270 / 105 | as of 1500 |

Compatibility

- To ensure compatibility of control board and software install the enclosed Processor Software CLLC_1203 on Control Board PCB1 CM+9 5270 9450 X.

Order No.: DD+DIS277.04E



1 piece W4WAS MA 1

Classic E.O.S.

Type 5270 / 100
as of SN 4500

Classic E.O.S. CL

Type 5270 / 105
as of SN 1500

| Urgency | Reason | Subject |
|---|--|--|
| <input type="radio"/> Immediately | <input type="radio"/> Safety | <input checked="" type="checkbox"/> Cure for Complaint Com0404010101 (PowerHelp) |
| <input type="radio"/> Next service | <input checked="" type="radio"/> Reliability | <input checked="" type="checkbox"/> Problem may concern all devices |
| <input checked="" type="radio"/> In case of failure | <input type="radio"/> Quality improvement | <input type="checkbox"/> Problem depending on serial number / batch |
| <input type="radio"/> As required | <input type="radio"/> Functional changes | <input type="checkbox"/> New spare part |
| | <input type="radio"/> Compatibility | |

Magnet Not Sufficiently Fixed in the Machine Cover



This document describes the symptoms of an undefined operating status as well as the cause and remedy by fixing the magnet again.



- For an overview of valid FSBs refer to the order list, see MedNet - GSO Library.

Error symptoms

The machine is not ready for operation or switches to undefined conditions between on/off mode.

(Complaint: COM040401010101)

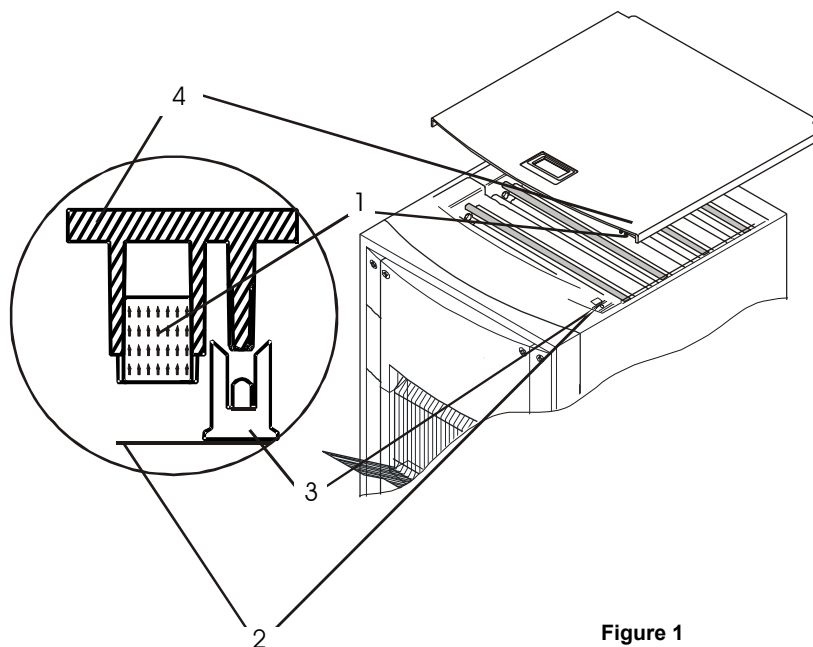


Figure 1

Error cause

The magnet (1) integrated in the cover (4) got loose or dropped out and prevents correct closing of the cover. This impedes the function of the safety switch (3) located on the machine surface (2) partly or completely.



You may assume that the magnet got loose if it is no longer flush with the magnet holder.

Remedy

Use a two-part glue and fix the magnet in its holder, the gap of 0.5 mm must be completely covered with glue.



We recommend the two-part DELO-AUTOMIX 1895 or a similar product with equivalent properties.

We do not supply this glue, please purchase this glue locally.



For the properties of DELO-AUTOMIX 1895 go to the Internet under [http://www.delo.de/datenblatt/DELO-DUOPOX_1895_\(TIDB-D\).pdf](http://www.delo.de/datenblatt/DELO-DUOPOX_1895_(TIDB-D).pdf).

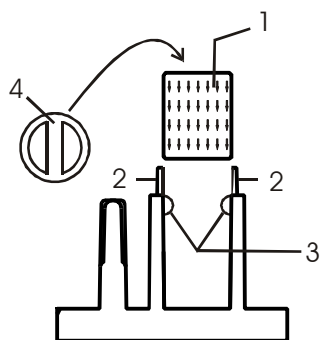


Figure 2

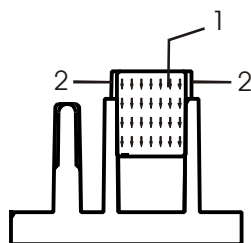


Figure 3

- Clean the magnet and magnet holder from grease and dirt. It is not necessary to remove any remaining glue.
 - Prepare the 2-part glue according to the manufacturer's instructions.
 - Apply the 2-part glue (3) in the magnet holder (2).
 - Insert the magnet (1) with the upper magnet side (4) facing the machine.
 - Press the magnet (1) down in its holder (2).
-
- Fix the magnet (1) aligned with its holder (2).



Required time: ½ h

Order No.: DD+DIS288.04E



1 piece W4XML MA 1

Classic E.O.S.

Type 5270 / 100
as of SN 4500

Classic E.O.S. CL

Type 5270 / 105
as of SN 1500

| Urgency | Reason | Subject |
|---|---|---|
| <input type="radio"/> Immediately | <input type="radio"/> Safety | <input type="checkbox"/> Cure for Complaint (Powerhelp) |
| <input type="radio"/> Next service | <input type="radio"/> Reliability | <input type="checkbox"/> Problem may concern all devices |
| <input type="radio"/> In case of failure | <input checked="" type="radio"/> Quality improvement | <input type="checkbox"/> Problem depending on serial number / batch |
| <input checked="" type="radio"/> As required | <input type="radio"/> Functional change | <input checked="" type="checkbox"/> New device |
| | <input type="radio"/> Compatibility | |

Introduction of Anti-Algae-Unit

Type: 5279/100



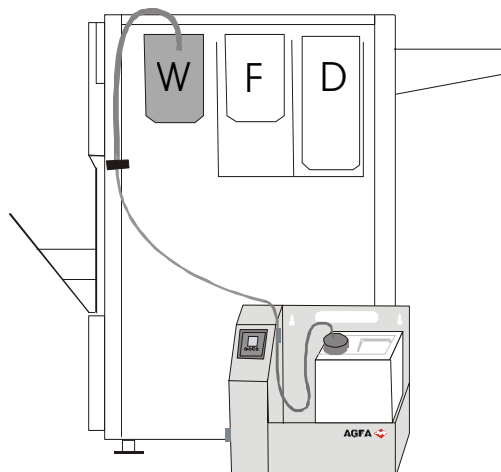
This document describes the newly introduced Anti-Algae-Unit Type 5279/100, an optional device for X-ray film processors.



- For an overview of valid FSBs refer to the Order List.
See MEDNET -> GSO Library.

Subject

The Anti-Algae-Unit has been developed to prevent of algae contamination to the water tank. Therefore, controlled by a timer, Algezid II is pumped to the water tank of a X-ray film processor via an integrated pump. The timer activates the pump in certain time ranges, which are adapted to an average film processing cycle and to the maintenance cycle of the film processor.



5279_100_001.cdr

figure 1

The Anti-Algae Unit cannot be used in parallel with the Chiller for developer cooling, since only one optional connection is possible on the water tank elbow.



Algezid II is not included in delivery.

Distribution of Agfa Algezid II:

Contact your local Agfa Service, Art: BUNDZ

Or in USA :

Agfa Corporation, 100 Challenger Road, Ridgefield Park, NJ 07660, USA,
Phone: (001201) 4402500, Fax: (001) 3424742

Order Information

- **Order Number:** CM+9 5279 9100 0
- **Start of production:** 01.08.2004

Documentation

Service documentation and Spare Parts List Anti-Algae-Unit
(order number: DD+DIS126.04E)

Training

There is no training required for FSEs

Order No.: DD+DIS214.04E



1 piece WYZZE 1

Classic E.O.S.

Type 5270/100
as of SN 4500

Classic E.O.S. CL

Type 5270/105
as of SN 1500

| Urgency | Reason | Subject |
|---|---|--|
| <input type="radio"/> Immediately | <input type="radio"/> Safety | <input type="checkbox"/> Cure for Complaint (PowerHelp) |
| <input type="radio"/> Next service | <input checked="" type="radio"/> Reliability | <input checked="" type="checkbox"/> Problem may concern all devices |
| <input type="radio"/> In case of failure | <input type="radio"/> Quality improvement | <input type="checkbox"/> Problem depending on serial number / batch |
| <input checked="" type="radio"/> As required | <input type="radio"/> Functional changes | <input checked="" type="checkbox"/> New Spare part |
| | <input type="radio"/> Compatibility | |




Installation of the Tank Reinforcement CM+9 5270 9071 0



This document describes the installation of a tank reinforcement that prevents bending of the intermediate tank walls.



- For an overview of valid FSBs refer to the order list, see MedNet - GSO Library.

| | |
|---|--|
| Error symptoms | The feed rollers of the water rack rub on the intermediate wall |
| Error cause | <p>Tank wall between fixer and water tank bulges.</p> <p>In some machines this bulging causes the feed rollers of the water rack to rub on the intermediate wall.</p> <p>Reason:</p> <ul style="list-style-type: none">- Temperature differences between fixer and water tanks;- fixer tank full, water tank empty, while the machine is OFF, the intermediate wall is bulging- parameters effective during tank manufacturing which cannot be influenced. |
| Remedy | <p>Mounting of a U-shaped tank frame on the upper edge of the intermediate wall between fixer and water tank.</p> <p>CM+9 5270 9071 _</p> |
|  | <p>Scope of delivery:</p> <ul style="list-style-type: none">• 1 x U-shaped steel tank rail• Installation Instructions DD+DIS104.04D/E/F |
|  | <p>Required time:</p> <p>approx. ½ h</p> |
|  | <p>If you have any problems with chemical carry-over from tank to tank when using the tank reinforcement (capillary effect) please order Elastosil E43 separately.</p> <p>Information about the "Elastosil E43" silicone</p> <p>Due to strict regulations regarding the shipping of "dangerous substances" the silicone tube is no longer included in the shipment of the tank reinforcement.</p> <p>Order number: CM+9 9999 9278 0</p> |

Order No.: DD+DIS184.05E



1 piece YYOOD MA1

Classic E.O.S.

Type 5270 / 100
as of SN 4500

Classic E.O.S. CL

Type 5270 / 105
as of SN 1138

Bulletin Information

| | Urgency | | Ranking | | Subject |
|----------------------------------|---------------------------|----------------------------------|---------------------------------------|-------------------------------------|--|
| <input type="radio"/> | Immediately | <input type="radio"/> | Mandatory – safety relevant | <input type="checkbox"/> | Cure for Complaint COMXXXXXXXXXXXX (PowerHelp) |
| <input type="radio"/> | Next service | <input checked="" type="radio"/> | Mandatory for affected systems | <input checked="" type="checkbox"/> | Problem may refer to machines where the current sensor board has been replaced. |
| <input checked="" type="radio"/> | In case of failure | <input type="radio"/> | Recommended – quality improvement | <input type="checkbox"/> | Problem only concerns devices with serial number // batch |
| <input type="radio"/> | If required | <input type="radio"/> | Only for information | | |
| | | <input type="radio"/> | Not compatible | | |

Service 574: "IR heater in dryer defective" due to measuring error caused by wrong cable positioning at the Current Sensor Board PCB2.



This document describes how to correct the wrong cable positioning at the Current Sensor Board PCB2.



- For an overview of valid FSBs refer to the order list, in the MedNet -> GSO Library.

Printed versions of this document are not controlled.

The reader should always make sure to use the newest edition of the document available via MedNet .

Error symptoms Service 574: "IR-heater in the dryer defective"

Error cause Wiring error on the Current Sensor Board PCB2 Measuring error caused by wrong cable positioning at the Current Sensor Board PCB2:
one and a half windings around the current sensor generally result in low current values. Monitoring of the IR heater has only minimum tolerances and therefore triggers the error message 574.

Check Check the number of windings around the current sensor:

- (1) Switch off machine and disconnect from mains.
- (2) Remove top cover and side panels on the left.
Remove the dryer panels.

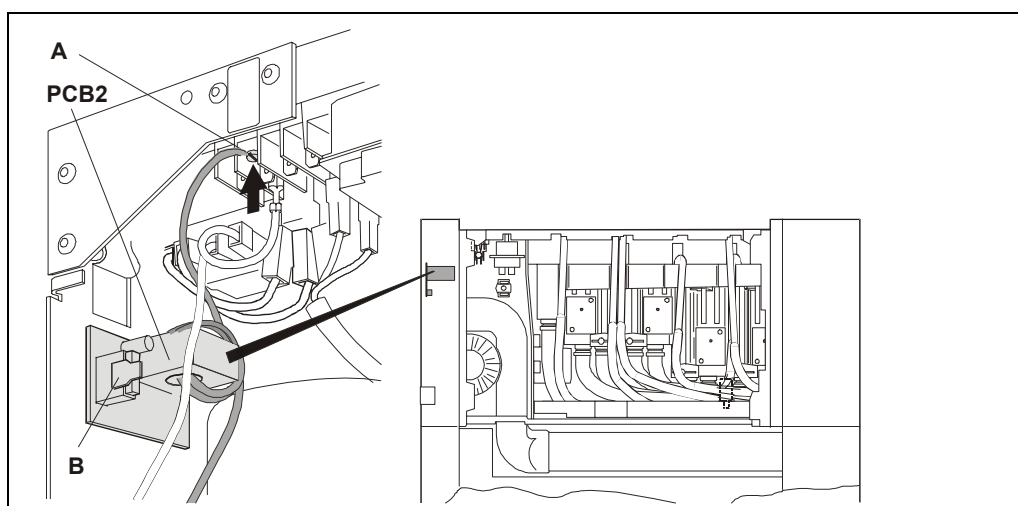


Figure 1

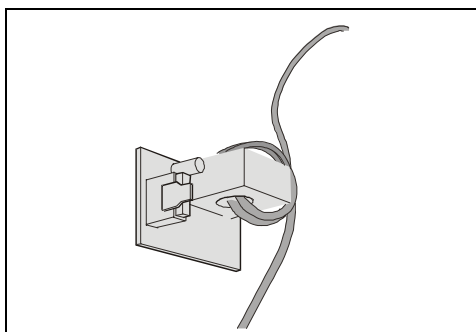


Figure 2

Wrong cable positioning
Continue with Remedy.

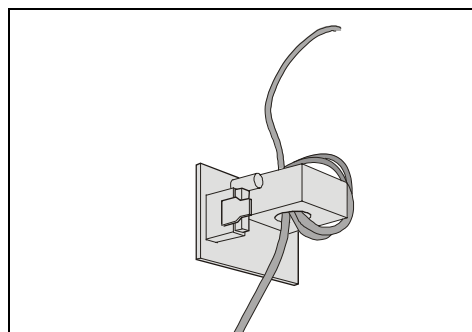


Figure 3

Correct cable positioning
Check completed.

- Mount the covers and panels again.
- Connect the machine to the mains and switch on.

Remedy

- (3) Open the cable tie (A).
- (4) Unplug ST2 (B).
- (5) Remove the Current Sensor Board PCB2 from the holder.
- (6) Unthread the cable from the current sensor.
- (7) Thread the cable 3 times through the current sensor from below.
= 2 full windings.

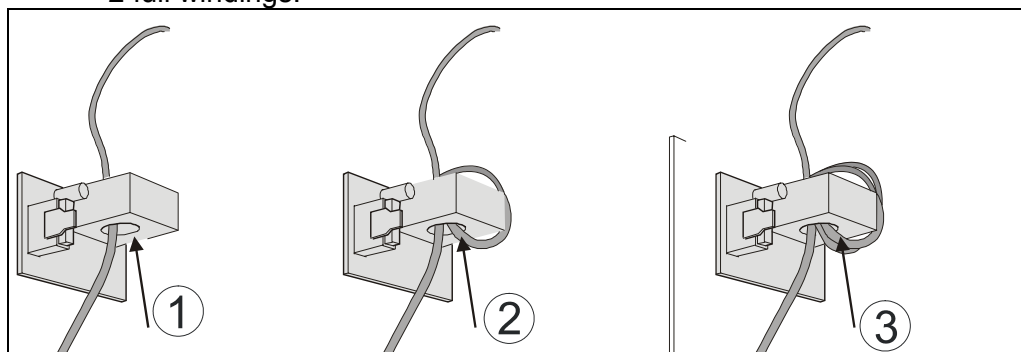


Figure 4



The cable must pass 3 times through the current sensor!



If the cable is threaded **from above** through the current sensor, it can only pass the sensor twice because of its length, which are 1.5 windings. (see Figure 5) .

This results in wrong current values during TEACH IN and function monitoring.

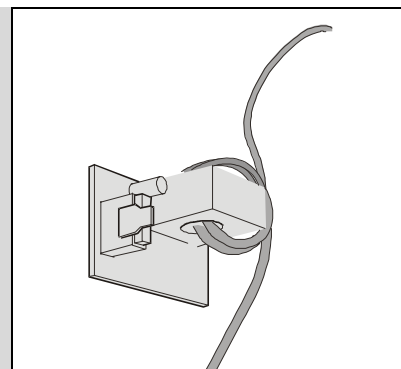


Figure 5

- (8) Insert current sensor PCB2 in the holder.
- (9) Plug in ST2 (B).
- (10) Screw the cable to the cable terminal (A).
- (11) Mount the covers and panels again.
- (12) Connect the machine to the mains and switch on.
- (13) Execute the <TEACH IN> procedure (see Chapter 6.2 of the documentation).

Document No.: DD+DIS009.07E

Classic E.O.S.
Type 5270 / 100
as of SN 4500

Classic E.O.S. CL
Type 5270 / 105
as of SN 1138

Manufacturer's Warning about Ground Fault Interrupters with Possibly Higher Trigger Current.

| Task | | | |
|--|--|-------------------------------------|--|
| Importance | Category | | Scope |
| <input checked="" type="radio"/> Next Service | <input checked="" type="radio"/> Required To be applied at all sites corrective preventive action or commercial goodwill | <input checked="" type="checkbox"/> | Cure for PowerHelp Complaint: HQ_0612080003. |
| | <input type="radio"/> Selective To be applied on affected sites corrective preventive action or commercial goodwill | <input type="checkbox"/> | Problem affects serial number(s) / batch(es) listed below |
| <input type="radio"/> Recommended | <input type="radio"/> Optional Improves functionality of product | <input checked="" type="checkbox"/> | Problem affects all sites |

Reporting

After completion of your task the following entry in your Service Report is required:

DD+DIS009.07E

*

* Insert the document number into the field "Comment" (SMS form)



Purpose of the Document:

- It describes how to check the GFI switch.



- For a complete overview of Service Bulletins refer to the Order List in MedNet.

CONFIDENTIALITY NOTE:

Use, dissemination, distribution or reproduction of this bulletin by unauthorized personnel is not permitted and may be unlawful.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

01-2007

Agfa Company Confidential

Document Node ID: 14331793
serv_001_service_bulletin_global_e_template_v02
Copyright © 2006 Agfa-Gevaert HealthCare

AGFA

1 Introduction

Subject A manufacturer's warning has been issued regarding a batch of ground fault interrupters (GFI) with possibly higher trigger current.
Affected components have also been installed in Classic E.O.S. equipment.

Affected machines The GFI switches were manufactured between January 2003 and May 2005 and have been installed in the following series:

- Classic E.O.S. Type 5270 / 100: SN 4500 - 5818
- Classic E.O.S. Type 5270 / 105: SN 1138 - 1142

Please note: as of 2003 GFI switches of the affected batch were also delivered as spare parts, so **all** machines can be affected.

Testing the GFI Operator protection on the Classic E.O.S. is still guaranteed – even without the GFI – since the machine is completely encapsulated for operator protection.
The GFI is exclusively used for machine protection. As long as the GFI reacts during the test this protection is still in effect.
The GFI switch must only be replaced if it fails to react during the functional test.

2 Prerequisites



SPARE PARTS:

GFI switch

Order number: CM+9 0452 3171 0

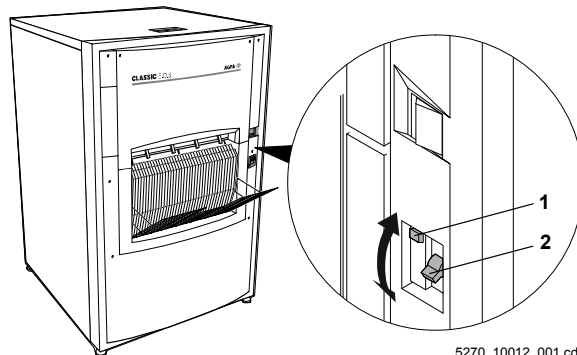
3 Checking the Function of the GFI Switch



REQUIRED TIME:
approx. 5 minutes

Press the test button (1).

- a) GFI switch reacts
(toggle switch (2) tilts to "0").
The switch function is correct.
Activate the GFI switch by flipping the
toggle switch (2) back.
- b) The GFI switch **fails** to react.
The switch is defective.
Replace the defective GFI switch.



5270_10012_001.cdr



NOTE:

Inform the customer that the function of the GFI switch must be checked 1x per month, as described in the User Manual.

Document No.: DD+DIS223.07E

Classic E.O.S.
5270/100
as of SN 4500

Classic E.O.S. CL
5270/105
as of SN 1138

This Bulletin is for Information Only

Empty Battery of the Clock Chip Causes Incorrect Date and Incorrect Time Display Followed by a Calibration Request

| Measure | |
|--------------|---|
| Urgency | Ranking |
| Next service | <input checked="" type="radio"/> Applying to all devices |
| | <input type="radio"/> Applying to the devices listed below |
| | <input type="radio"/> Optional, to improve the product function |



This document describes:

- Compatibility and obvious differences of control boards and clock chips.
- Replacement of clock chips and/or batteries.

CONFIDENTIALITY NOTE:

Use, dissemination, distribution or reproduction of this bulletin by unauthorized personnel is not permitted and may be unlawful.

DOCUMENT CONTROL NOTE:

The controlled version of this document resides on MedNet. Any printed copy of this document is uncontrolled.

10-2007

Agfa Company Confidential

Document Node ID: 19674321
global_service_bulletin_template_v0\$
Copyright © 2007 Agfa HealthCare N.V.

AGFA 
HealthCare

LIST OF CONTENTS

| | | |
|-------|--|----|
| 1 | Introduction | 3 |
| 1.1 | Differentiation Criteria for Control Boards and Clock Chips..... | 3 |
| 2 | Prerequisites | 4 |
| 3 | Remedy | 5 |
| 3.1 | Replacing the Clock Chip and/or Battery | 5 |
| 3.1.1 | Type 5270 / 100 as of SFN 4500 up to SN 6106 (Control Board I or II) and/or Type 5270 / 105 as of SN 1138 up to SN 1142 (Control Board I or II): Replace the Clock Chip or Battery | 6 |
| 3.1.2 | Type 5270 / 100 as of SN 6107 (Control Board II) and/or Type 5270 / 105 as of SN 1143 (Control Board II): Replace the Battery | 7 |
| 3.2 | Daten neu setzen | 8 |
| 3.2.1 | Calibrating the Replenishment Rate | 8 |
| 3.2.2 | Setting Date and Time | 13 |
| 3.3 | Disposing of the Battery and/or the Clock Chip | 14 |
| 4 | Checking the Remedy | 14 |
| 4.1 | Getting the Machine Ready for Operation | 14 |
| 5 | Appendix – Overview of Differentiation and Compatibility Criteria of Control Boards and Clock Chips | 15 |

1 Introduction

Symptom 1 The machine requests calibration of the replenishment rates after switching on.

Symptom 2 Incorrect date and incorrect time are displayed.

Error The battery in the clock chip is empty. The clock chip fails to save data when the machine switches off.

All data of the temporary infocounters is lost or displayed incorrectly when the machine is switched on again:

- Status, if calibration of the replenishment rates has been carried out
- Values of the replenishment rate calibration
- Processed film
- Expiration date of the maintenance interval
- Operating hours
- Management of the Error Hit List

Remedy Depending on the installed control board, either the clock chip or the Lithium battery of the clock chip must be replaced.

1.1 Differentiation Criteria for Control Boards and Clock Chips

New control boards CM+9 5270 9450 **3** (Label F8.5270.7890.4) with modified clock chips are available:

The clock chip on these control boards is soldered to the board and the Lithium battery is plugged into the clock chip. **The empty battery must be replaced.**

On previously installed control boards **the clock chip including battery must be replaced.**



NOTE:

The new control board was introduced to ensure compliance of the machines with RoHS regulations (Restriction of Certain Hazardous Substances). There are no changes regarding the functions of the control board.

2 Prerequisites

**NOTE:**

For an overview of the Control Boards I - II refer to the Appendix.

**SPARE PARTS:**

Order spare parts depending on the installed control board:

- Clock chip Order number CM+9 0441 7030 0 **for Control Board I**
- or
- Lithium battery Order number CM+9 0486 2012 0 **for Control Board II**

**TOOLS:**

- Small screwdriver
- Small Phillips screwdriver
- Grounding strap CM+9 9999 0830 0
- Graduated beaker (at least 1000 ml)

3 Remedy

**REQUIRED TIME:**

| | |
|--|---------------------|
| Replacing the clock chip/battery | approx. 15 min each |
| Calibrating the replenisher pumps and setting the time | approx. 30 min |

3.1 Replacing the Clock Chip and/or Battery

- (1) Switch off machine and disconnect from mains.
- (2) Remove top cover and side panels on the right.

**NOTE:**

Sections 3.1.1 ... 3.1.2 describe the replacement of the clock chip as well as the replacement of the battery, always depending on the respective SN range.
For an overview of the Control Boards I - II refer to the Appendix.

**3.1.1 Type 5270 / 100 as of SFN 4500 up to SN 6106 (Control Board I or II) and/or
Type 5270 / 105 as of SN 1138 up to SN 1142 (Control Board I or II):
Replace the Clock Chip or Battery**



NOTE:

Depending on the control board only one of the actions is required.
Control Board I has been installed ex-factory (→ action “clock chip replacement”).
If the control board was replaced during repair, Control Board II has been installed
(→ action “battery replacement”).

Either replace the clock chip (Control Board I):

- (3) Carefully pull the clock chip out of its socket using a small screwdriver.
See Figure 1.
- (4) Insert the new clock chip in the correct position according to the socket notch (1). Carefully place the pins on the socket and do not distort the chip when pressing it down!

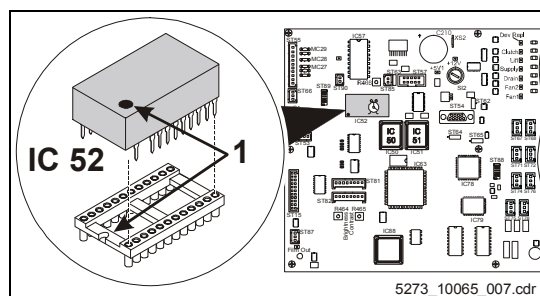


Figure 1: Replacing the clock chip



IMPORTANT:

Incorrect installation may result in damage of the newly installed clock chip.

Or replace the battery (Control Board II):

- (3) Pull the battery straight up to remove it, see Figure 3: Replacing the battery.
- (4) Insert the new battery in the correct position according to socket notch (1). Do not distort the battery when pressing it down!

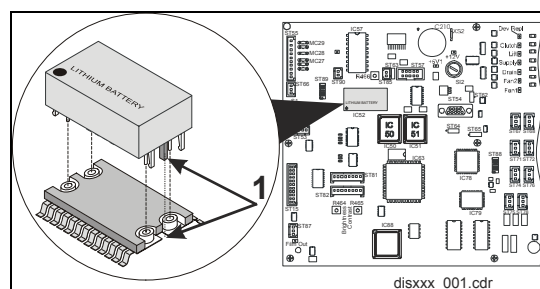


Figure 2: Replacing the battery

- (5) Connect the machine to power.

3.1.2 Type 5270 / 100 as of SN 6107 (Control Board II) and/or Type 5270 / 105 as of SN 1143 (Control Board II): Replace the Battery

- (3) Pull the battery straight up to remove it, see Figure 3: Replacing the battery.
- (4) Insert the new battery in the correct position according to socket notch (1). Do not distort the battery when pressing it down!

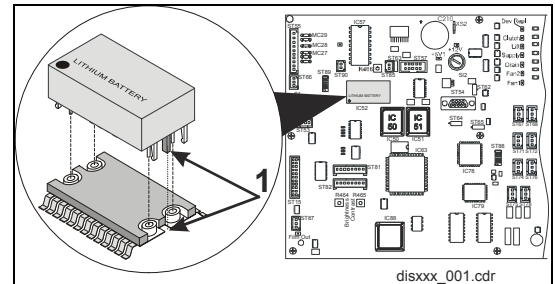


Figure 3: Replacing the battery

- (5) Connect the machine to power.

3.2 Setting the Data

The following setup must be carried out for all machines:

- (1) Calibrate the developer and fixer pumps.
- (2) Set the clock again.

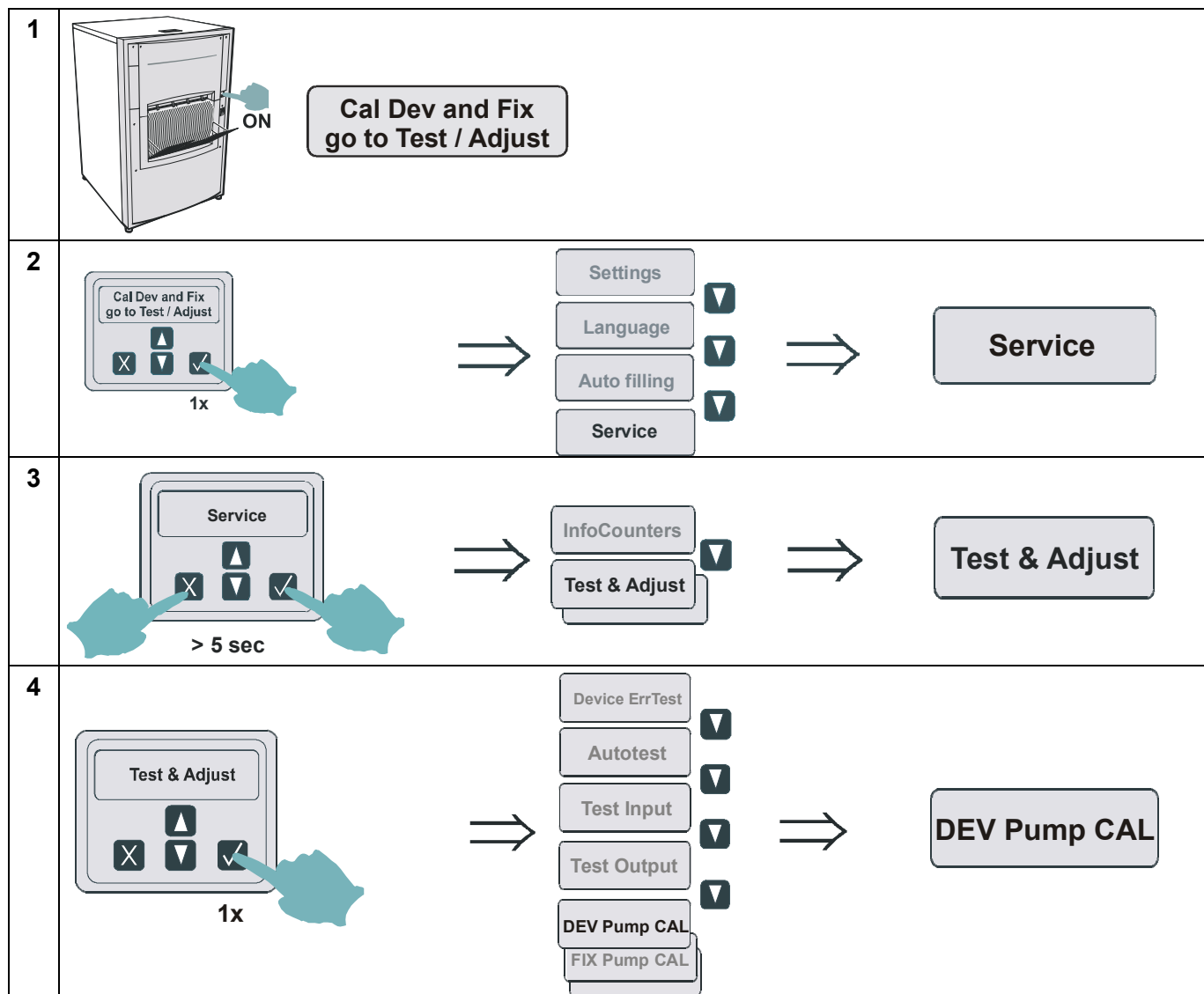
| Description | See chapter |
|------------------|-------------|
| Calibrating Rate | 3.2.1 |
| Setting | 3.2.2 |

3.2.1 Calibrating the Replenishment Rate

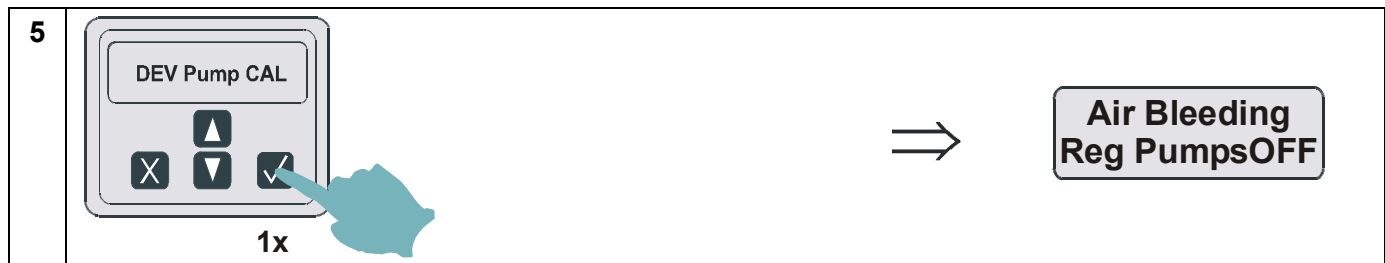
Preparations:

- (1) Press both arrow keys and hold them until the machine switches on. This resets all infocounters to zero (second operator required).
- (2) Remove the left hand side panel.
- (3) Pull out the replenisher supply pipes of developer or fixer, respectively.
- (4) Hold the end of the supply pipe in a graduated beaker (minimum capacity: 1000 ml).


→ Start the calibration:

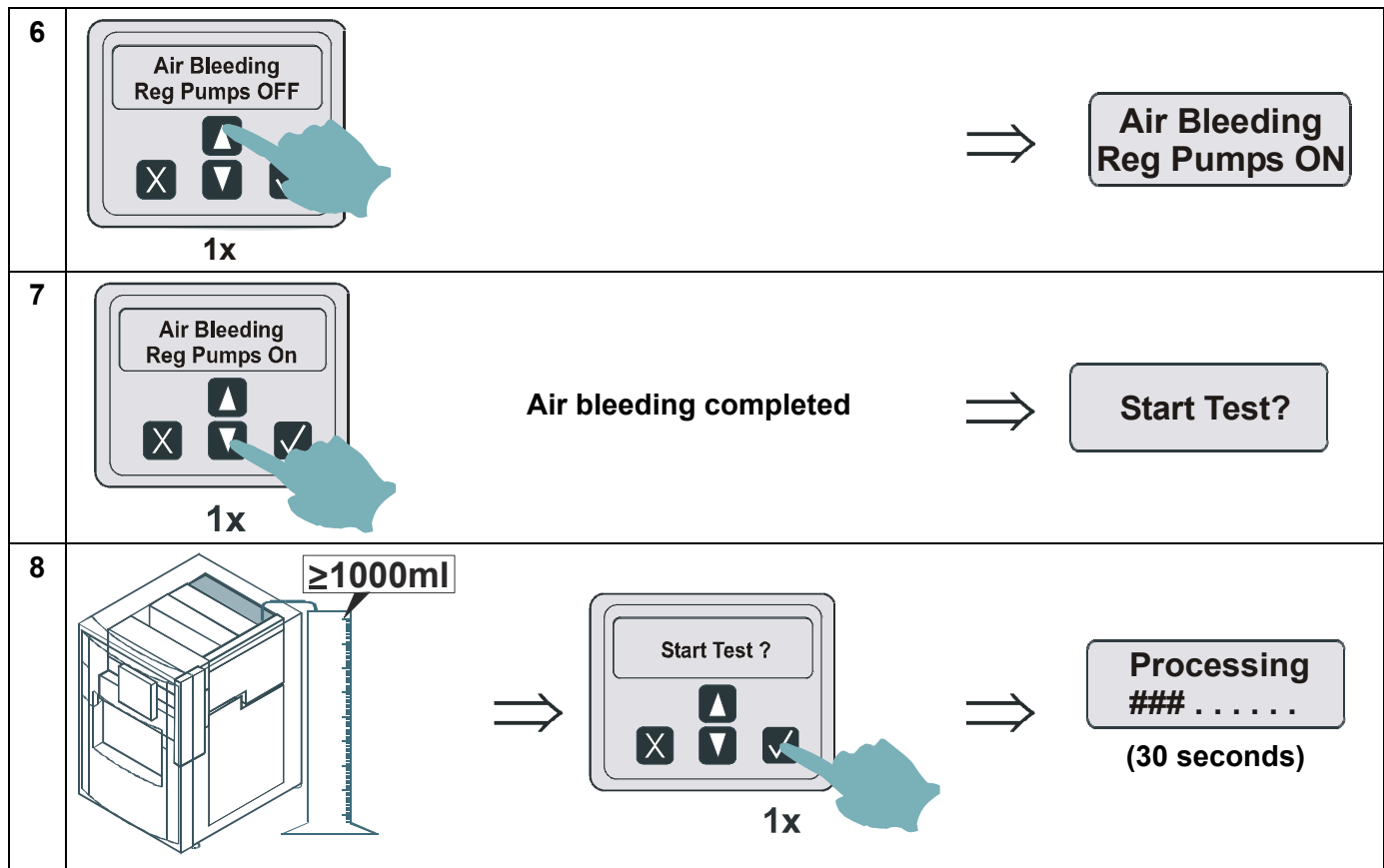


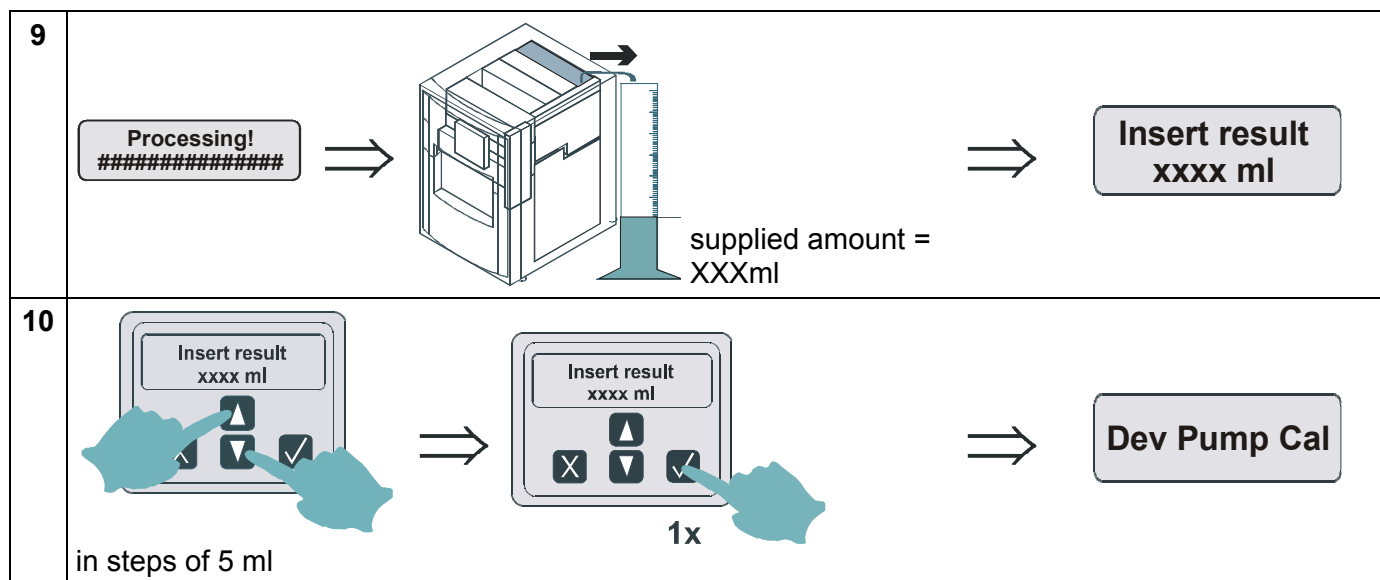
→ Calibrate the developer pump:



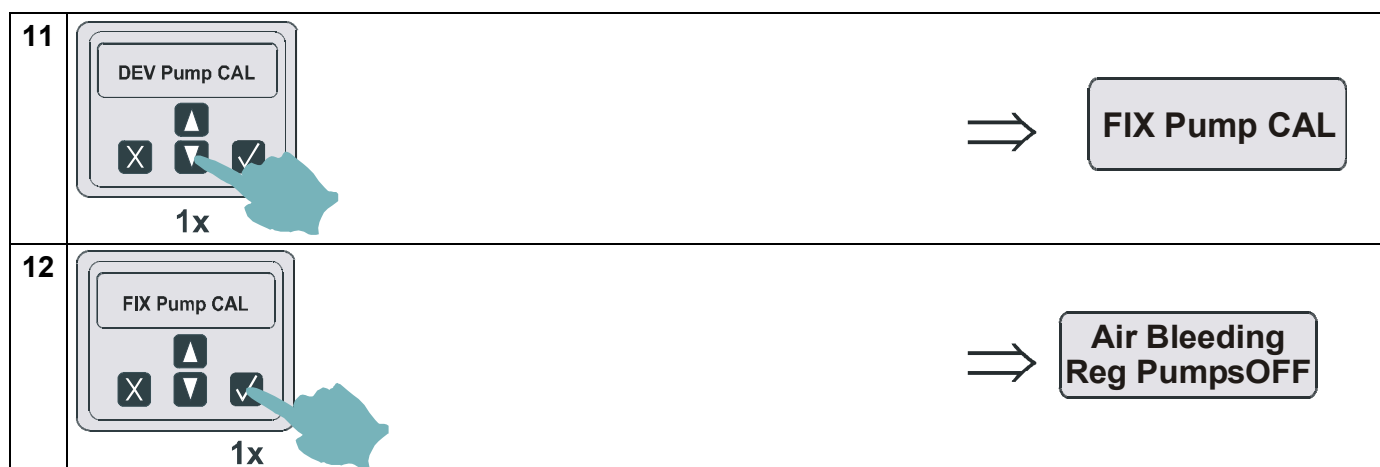
NOTE:

Start the "Air Bleeding" with the  key until no more bubbles are visible in the developer supply hose! The removed chemicals can be poured back into the respective machine tanks.




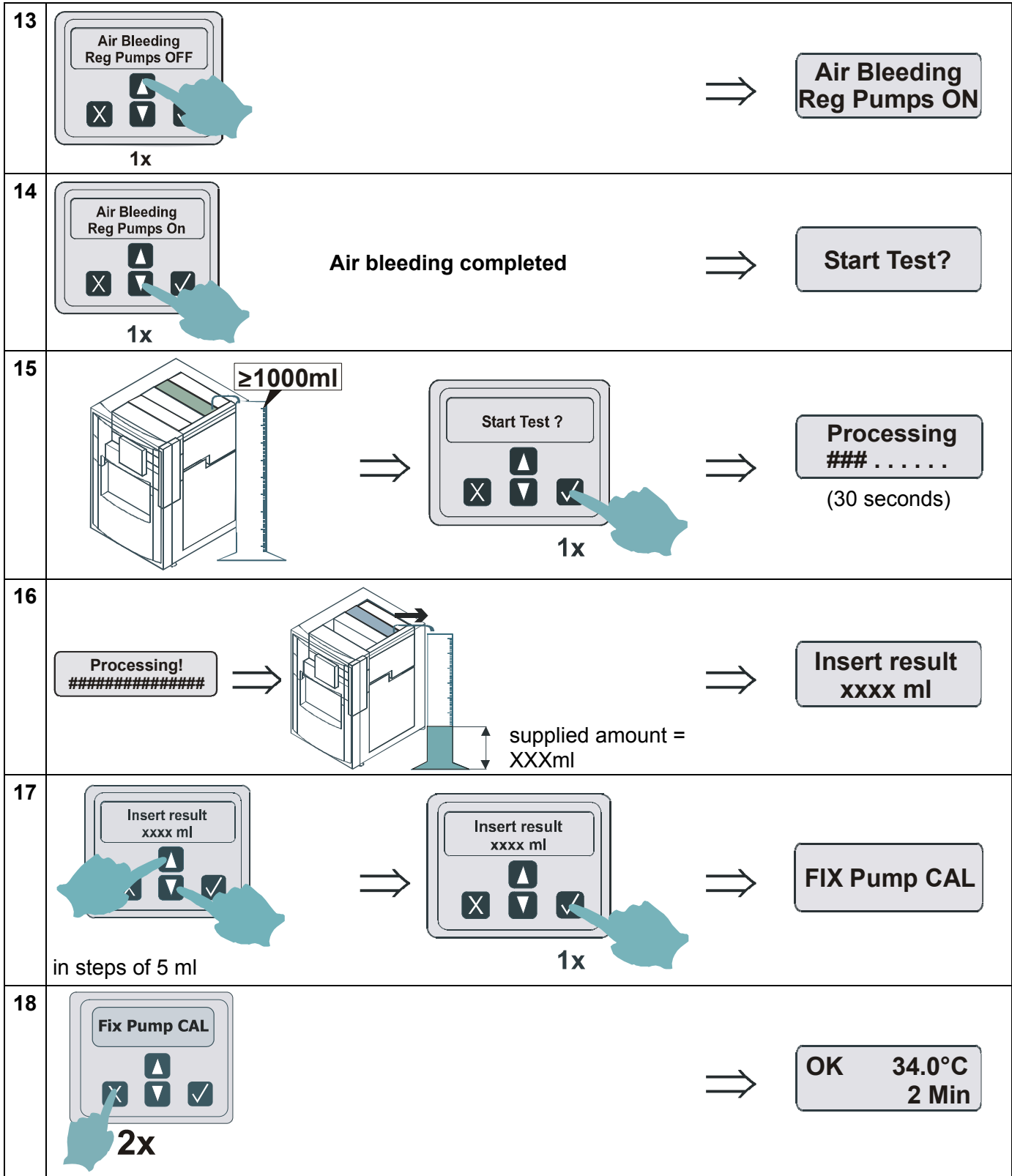


→ Calibrate the fixer pump:





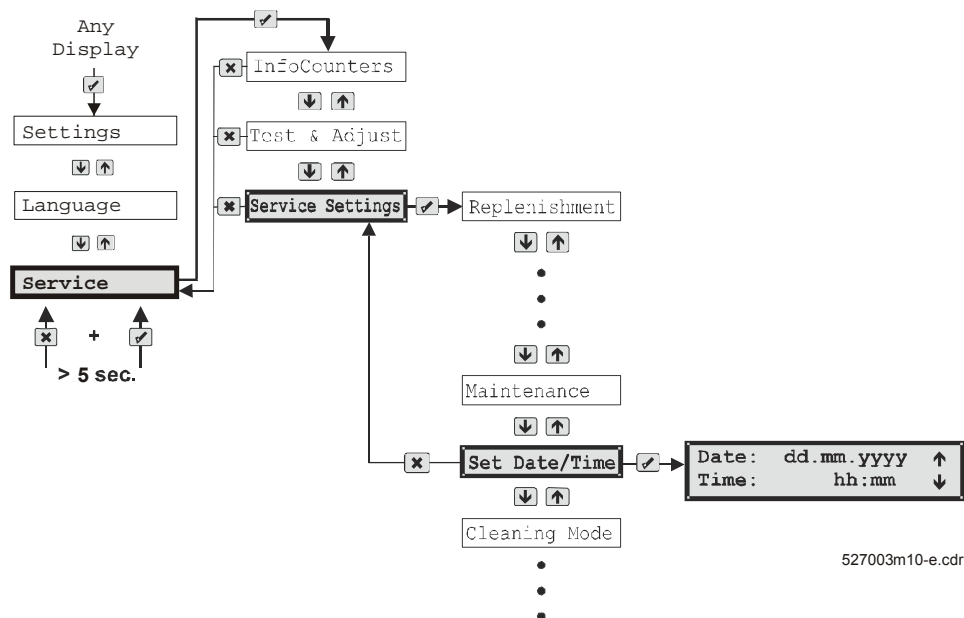
NOTE:

Activate the "Air Bleeding" with the  key until no more bubbles are visible in the supply hose for the developer! The removed chemicals can be poured back into the respective machine tanks.



3.2.2 Setting Date and Time

- (1) Access the SERVICE program by pressing the keys  and  simultaneously and holding them (5sec).
- (2) Call up the menu option <Set Date/Time>:










- (3) Set date and time:



NOTE:



- Press this key to cancel a setting.

| Action | Keys | Result |
|------------------------|---|---------------------------------|
| Select <Set Date/Time> |  | Date: dd.mm.yyyy Time: hh:mm |
| Set the date |   | Date: dd.mm.yyyy |
| Confirm the set date |  | |
| Set the time |   | Time: hh:mm |
| Confirm the set time |  | |

Date: dd = day mm = month yyyy = year

Time: hh = hours mm = minutes

3.3 Disposing of the Battery and/or the Clock Chip

- (1) Dispose of the used clock chip and/or the battery in compliance with the disposal regulations by local authorities!

4 Checking the Remedy

- (1) Check the function. To do so switch the machine off and on again.

Result Correct date and time are displayed (→ clock chip saves data). The machine no longer requests calibration.

After replacement of the Lithium battery:

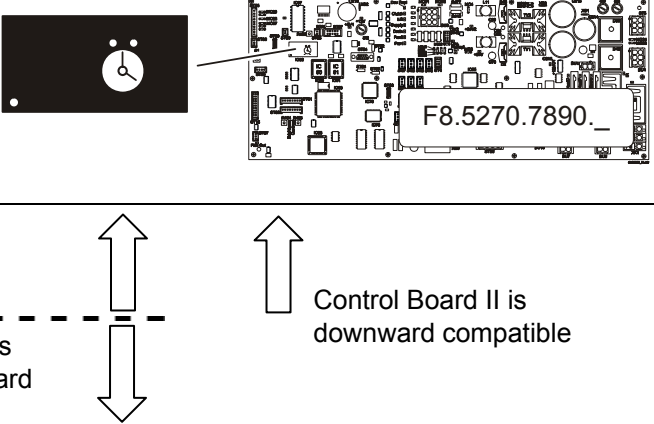
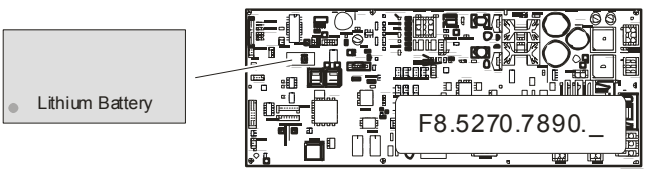
If the machine still request calibration, or display of date and time is still incorrect, the clock chip itself is defective and the control board must be replaced.

4.1 Getting the Machine Ready for Operation

- (1) Mount all covers and panels.

5 Appendix – Overview of Differentiation and Compatibility

Criteria of Control Boards and Clock Chips

| | | |
|---|--|--|
| Control Board I | Type 5270/100 as of SN 4500 - 6106 ex factory Type 5270/105 as of SN 1138 - 1142 ex factory | Control Board: CM+9 5270 9450_ Label: F8.5270.7890._ |
| <p>Black clock chip Order number: CM+9 0441 7030 0</p>  <p>Control Board II is downward compatible</p> | | |
| Control Board II | Type 5270/100 as of SN 6107 ex factory Type 5270/105 as of SN 1143 ex factory | Control Board: CM+9 5270 9450 x (x = 3) Label: F8.5270.7890.x (x = 4) |
| <p>Clock chip with yellow Lithium battery Order number battery: CM+9 0485 2012 0</p>  | | |

Section 14

contains all planning data including the required measures to be carried out on site before the machine is delivered.

The section is divided into

- Construction planning data
- Technical connection and performance data
- Safety instructions

Order No.: DD+DIS303.03E



1 piece WACPK MA 1

Classic E.O.S.

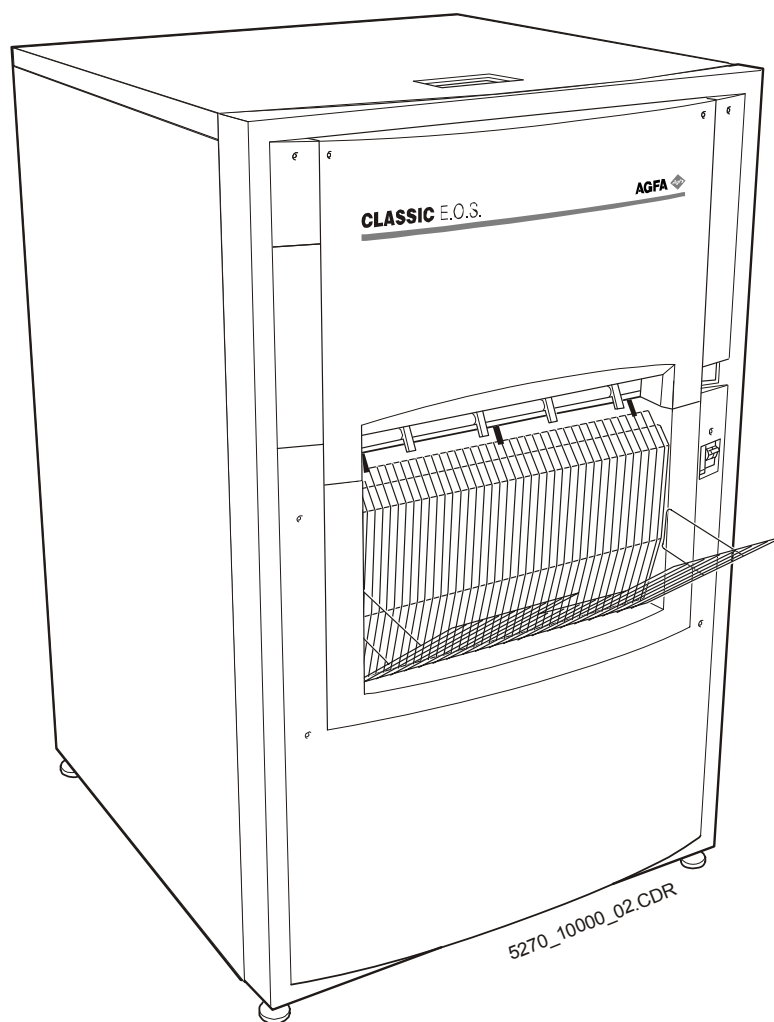
Type 5270/100

Classic E.O.S. CL

Type 5270/105

INSTALLATION PLANNING and Technical Data

Internal Update #5



The Installation Planning Instructions can also be ordered separately.
Order number: DD+DIS303.03E

Caution:

This system uses mains voltage. Please observe the pertinent safety instructions.

These instructions describe adjustments and routines, which must only be performed by qualified technical personnel.

Note:

Electrical repairs and connections must only be made by certified electricians.

Mechanical repairs and connections must only be made by certified technicians.

CE Declaration:

According to the medical directives the CE Declaration (CE Conformity) becomes void if the product is modified without permission of the manufacturer!

This applies to all parts, not only the safety devices!

We reserve the right to change data and characteristics in the light of technical progress.

Chapter 14

Contents

| | | |
|----------|--|-----------|
| 1 | Safety | 1 |
| 2 | Scope of Delivery and Accessories..... | 3 |
| 2.1 | Classic E.O.S. Type 5270/100 | 3 |
| 2.2 | Classic E.O.S. CL Type 5270/105 | 3 |
| 2.3 | Peripheral equipment..... | 4 |
| 2.4 | Exhaust connection through the floor..... | 4 |
| 3 | System Overview..... | 5 |
| 3.1 | Classic E.O.S. Type 5270/100 | 5 |
| 3.2 | Classic E.O.S. CL Type 5270/105 | 6 |
| 4 | Machine Dimensions..... | 7 |
| 4.1 | Classic E.O.S. Type 5270/100 | 7 |
| 4.2 | Classic E.O.S. CL Type 5270/105 | 8 |
| 5 | Transport path..... | 9 |
| 6 | Access for Repair and Maintenance..... | 10 |
| 6.1 | Classic E.O.S. Type 5270/100 | 10 |
| 6.2 | Classic E.O.S. CL Type 5270/105 | 11 |
| 7 | Daylight / Darkroom Installation (only Classic E.O.S. Type 5270/100)..... | 12 |
| 7.1 | Machine in the daylight, film feed in the darkroom, light seal at the darkroom feed table | 12 |
| 7.1.1 | Installation at the wall opening | 12 |
| 7.1.2 | Installation with light tight wall..... | 13 |
| 7.2 | Machine in the darkroom, film exit in the daylight, light seal at the dryer with light tight wall | 14 |
| 7.2.1 | Installation at the wall opening with light tight wall | 14 |
| 7.3 | Light tight wall | 15 |
| 8 | Installation | 16 |
| 8.1 | Hoses and installation material..... | 16 |

| | | |
|------------|--|-----------|
| 8.2 | Supply and disposal through the lower front panel (only Classic E.O.S. Type 5270/100) | 17 |
| 8.2.1 | Instructions for breaking out the openings..... | 17 |
| 8.2.2 | Required openings for standard installations | 17 |
| 8.2.3 | Installing the developer / fixer supply hoses | 18 |
| 8.2.4 | Installing the disposal hoses..... | 19 |
| 8.3 | Supply and disposal through the floor..... | 20 |
| 8.3.1 | Installing the disposal hoses..... | 21 |
| 8.4 | Replenisher tanks for developer and fixer | 22 |
| 8.5 | Disposal tanks | 23 |
| 8.6 | Water connection | 24 |
| 8.6.1 | Wall / machine connection at a water pressure of 2 – 6 bar..... | 25 |
| 8.6.2 | Wall / machine connection at a water pressure > 6 bar..... | 26 |
| 8.6.3 | Overview of adaptation parts for water installations: | 27 |
| 8.7 | Exhaust connection | 29 |
| 8.7.1 | Exhaust connection through lower front panel (only Type 5270/100)..... | 29 |
| 8.7.2 | Exhaust connection through the floor | 30 |
| 8.8 | Electrical connection of the machine | 31 |
| 9 | Technical Data | 33 |
| 9.1 | Electrical data | 33 |
| 9.2 | Ambient and climatic conditions | 33 |
| 9.3 | Transport and storage conditions | 34 |
| 10 | Machine Specifications..... | 35 |
| 10.1 | Type overview..... | 35 |
| 10.2 | Film types..... | 35 |
| 10.3 | Film formats | 35 |
| 10.4 | Functional data..... | 36 |
| 11 | Dimensions and Weights..... | 37 |
| 11.1 | Classic E.O.S. Type 5270/100 | 37 |
| 11.2 | Classic E.O.S. CL Type 5270/105 | 37 |
| 12 | Machine Standards and Directives | 38 |
| 12.1 | Safety..... | 38 |
| 12.2 | Radio interference suppression..... | 38 |
| 12.3 | Electromagnetic compatibility | 38 |
| 12.4 | Certificates and guidelines | 39 |
| 13 | Checklist for Installation Planning | 41 |

1

Safety**General safety instructions**

- The machine must only be used as described in the operating instructions. Any other use may result in damage to the machine or may affect the machine function with the consequence that the machine can no longer be used as intended, and therefore presents a risk for patients, user, and environment.
- The machine must only be operated by qualified personnel trained on the machine.
- Ensure that only trained personnel have access to the machine.
- Ensure that the machine can always be supervised and that any tampering is prevented.
- Repairs or modifications on the machine must only be performed by trained service personnel authorized by Agfa.
- In case of visible damage on the machine housing the machine must not be operated or used, and must immediately be disconnected from the mains.
- Built-in or external safety devices must not be circumvented or disabled.
- Disconnect the machine from the mains before starting any maintenance.
- If a mains connection is absolutely required these maintenance routines must only be made by specially trained personnel.
- Like all technical devices, this machine must be operated, cared for and serviced correctly as described in the documentation provided with the machine.
- If the machine is not operated correctly, or if it is not serviced correctly, Agfa will not be liable for any resulting disturbances, damage or injuries.
- When installing the machine make sure that either the mains plug or an all-cable disconnecting device is provided in the internal installation close to the machine and is easily accessible.
- If the machine is connected with other components or assemblies, Agfa will guarantee safety only for combinations which are approved by Agfa.
- In case of conspicuous smoke or noises, immediately disconnect the machine from the mains.

Special instructions for the handling of chemicals

- When handling chemicals, always observe the applying safety and environmental regulations, as well as the operating and warning instructions pertaining to these chemicals.
- Wear stipulated protective clothing and safety goggles.
- When disposing of chemicals and waste water, you must comply with the local regulations concerning waste water and environmental protection.
- If photo-chemicals get in your eyes, proceed exactly according to the warning instructions and/or the instructions published by the manufacturers of the chemicals. If required, immediately rinse your eyes with cold water. Afterwards see the doctor immediately.
- Avoid inhaling of chemical fumes. Make sure that there is sufficient ventilation at the installation site of the machine, i.e. an air exchange that is at least ten times the room volume per hour.
- Always comply with the installation instructions.
- Verify tightness of all connections for chemicals and water, as well as waste water, on the machine in regular intervals. At least check whenever suggested in the operating instructions and/or service instructions.

- If solution gets into the inside of the machine (e.g. by spilling during tank filling), the machine must immediately be disconnected from the mains and cleaned thoroughly by the service personnel.
- Do not use additional chlorine or chlorine containing substances inside the processor. The use of additional chlorine or chlorine containing substances can lead to irreversible damage of the equipment. Using these substances may void the manufacturers warranty.

The film processor must not be operated in the direct vicinity of the patients as defined in EN60601-1 and IEC 601-1.

Adherence to safety regulations

- This film processor meets the safety requirements as defined in EN 60950: 1997 (IEC 950) and EN 60601-1-2: 1993, UL 1950 and CSA C22.2 No. 950 and has interference suppression as defined in EN 50081-1, EN 55011, and FCC 47 Part 15, Subchapter B, Class A.
- The water connection is in compliance with DIN 1988 / EN 1717:2001.

2 Scope of Delivery and Accessories

2.1 Classic E.O.S. Type 5270/100

| Machine | Type | Power connection | ABC Code |
|----------------|----------|---------------------------------|----------|
| Classic E.O.S. | 5270/100 | 1 N~ 230 V (200-240 V) 50/60 Hz | 37XK3 |

Accessory box

- Wire chute
- Exhaust hose including joint to the connection stub
- Power cable UL NEMA 6-20 P
- Power cable VDE CEE 7 standard cover VII
- Sealing tape 12x12mm; 1.3m long; self-adhesive
- Pipe
- Label (wrap-around) DEV, FIX, WAT; OVERFLOW
- Installation kit
- Accessory box with small installation parts
- Accessory box with installation parts for the exhaust
- Technical documentation

2.2 Classic E.O.S. CL Type 5270/105

| Machine | Type | Power connection | ABC Code |
|-------------------|----------|---------------------------------|----------|
| Classic E.O.S. CL | 5270/105 | 1 N~ 230 V (200-240 V) 50/60 Hz | EFPHK |

Accessory box

- Wire chute
- Exhaust hose including joint to the connection stub
- Power cable UL NEMA 6-20 P
- Power cable VDE CEE 7 standard cover VII
- Sealing tape 12x12mm; 1.3m long; self-adhesive
- Pipe
- Label (wrap-around) DEV, FIX, WAT; OVERFLOW
- Installation kit
- Accessory box with small installation parts
- Accessory box with installation parts for the exhaust
- Technical documentation

2.3 Peripheral equipment

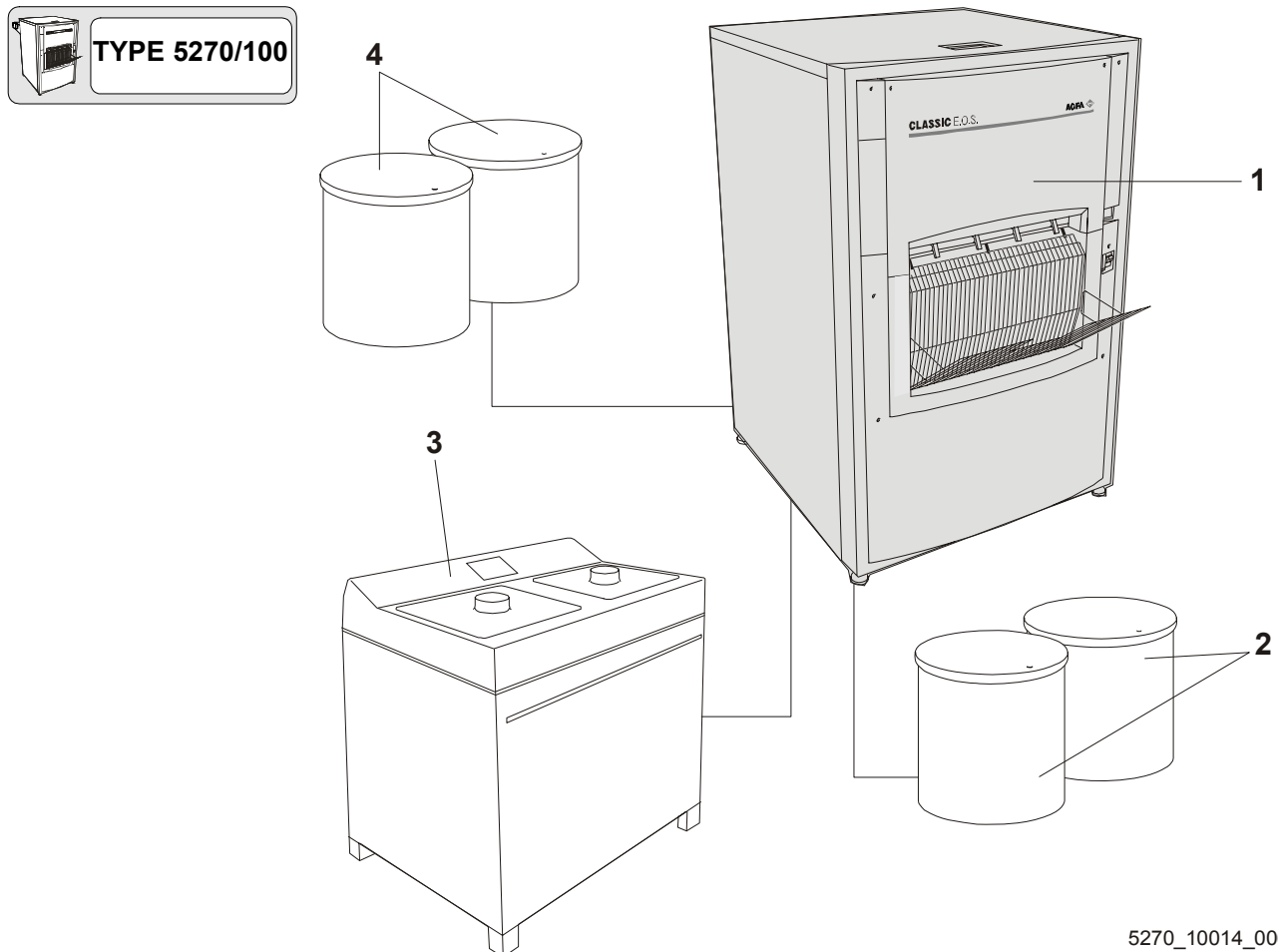
| | |
|--|------------------------------------|
| Mixer | Type 5280 |
| Mixer communication cable (Mixer to film processor) | CM+9528030301 |
| Replenisher tanks (2 x 30 liters) with level sensor / cable 5 m | Type 8186 / 701 ABC Code: FJ1QL |
| Replenisher tanks (2 x 80 liters) with level sensor / cable 6 m | Type 8186 / 101 ABC Code: F98XW |

2.4 Exhaust connection through the floor

Order an additional exhaust stub Ø 100 mm, CM+9522030091

3 System Overview

3.1 Classic E.O.S. Type 5270/100



5270_10014_006.cdr

Figure 1

The system requires the following components which must be considered in the planning:

- 1 Film processor Classic E.O.S. 5270/100
- 2 Disposal tanks or connection to a centralized disposal system
- 3 Chemical solution mixer
- 4 Replenisher tanks for developer and fixer instead of mixer
- Water connection via water filter (not shown)

Depending on the customer's wishes, the film processor can be combined with the following additional equipment.

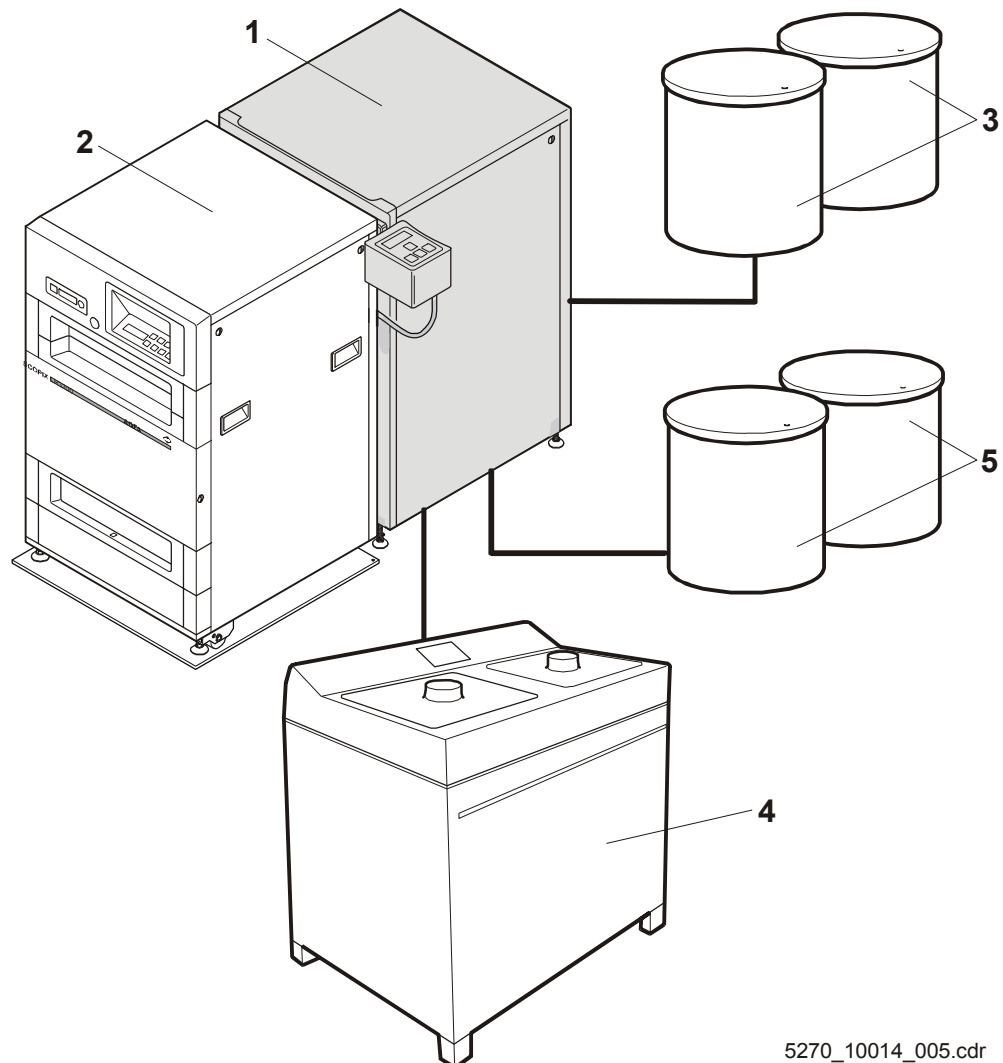
According to the required configuration further installation planning for corresponding equipment (e.g. mixer) must be taken into consideration.

3.2

Classic E.O.S. CL Type 5270/105



The system requires the following components which must be considered in the planning:



5270_10014_005.cdr

Figure 2

- 1 Film processor Classic E.O.S. CL 5270/105
- 2 Laser Imager LR3300
- 3 Disposal tanks or connection to a centralized disposal system
- 4 Chemical solution mixer
- 5 Replenisher tanks for developer and fixer instead of mixer
- Water connection via water filter (not shown)

Depending on the customer's wishes, the film processor can be combined with the following additional equipment.

According to the required configuration further installation planning for corresponding equipment (e.g. mixer) must be taken into consideration.

4 Machine Dimensions

4.1 Classic E.O.S. Type 5270/100

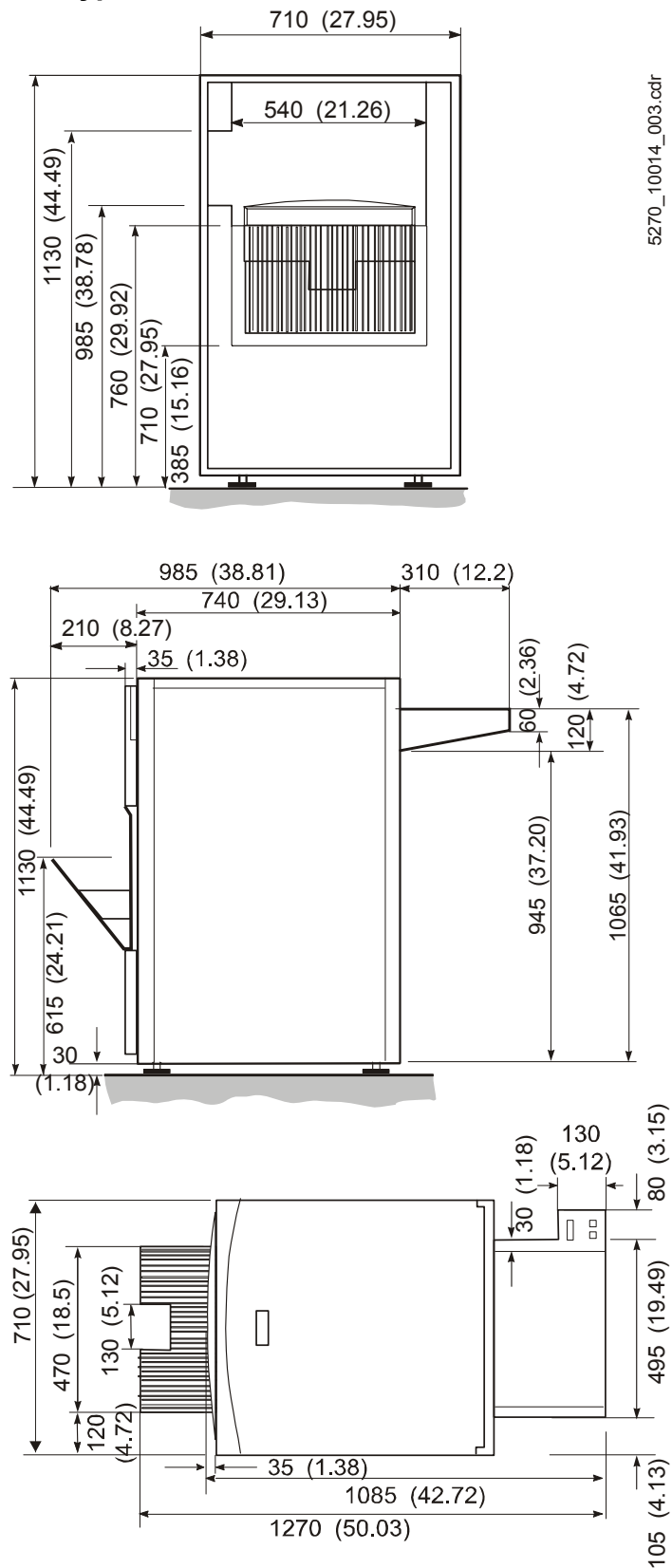
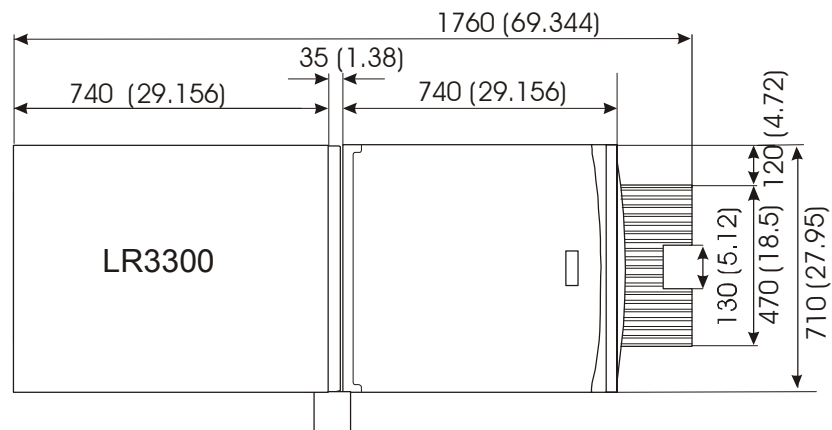
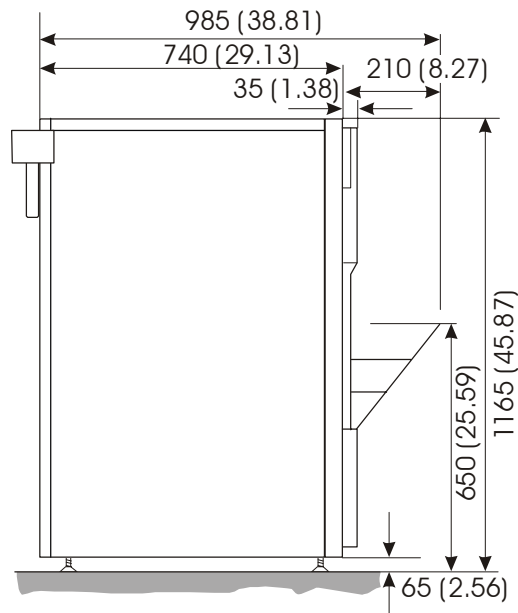
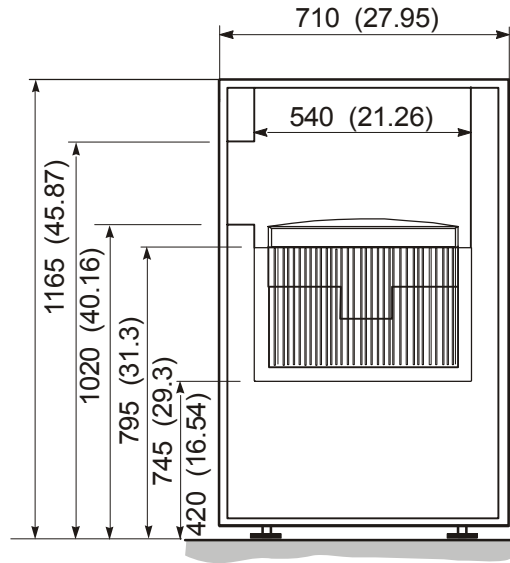
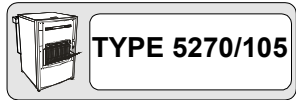


Figure 3

Dimensions in mm (inch)

4.2

Classic E.O.S. CL Type 5270/105



5270_10014_004.cdr

Figure 4

Dimensions in mm (inch)

5**Transport path**

The film processor must fit through all doors and hallways on its transport path to the installation site.

| Classic E.O.S. / Classic E.O.S. CL (Type 5270/100/105) | Smallest door width |
|---|---------------------------------|
| without pallet | at least 73 cm (29 inch) |
| with pallet | at least 82 cm (32 inch) |

6 Access for Repair and Maintenance

6.1 Classic E.O.S. Type 5270/100



TYPE 5270/100

The required floor space for the film processor (with feed table, chute and the required clearance on the left) is 1270 x 860 mm (50.03 x 33.88 inch).

The free space indicated in the illustration must be guaranteed for repair and maintenance, otherwise the time required for service will increase.



Optimum dimensions:

We recommend to plan on this free space.



Minimum dimensions:

Do not go below this minimum space.

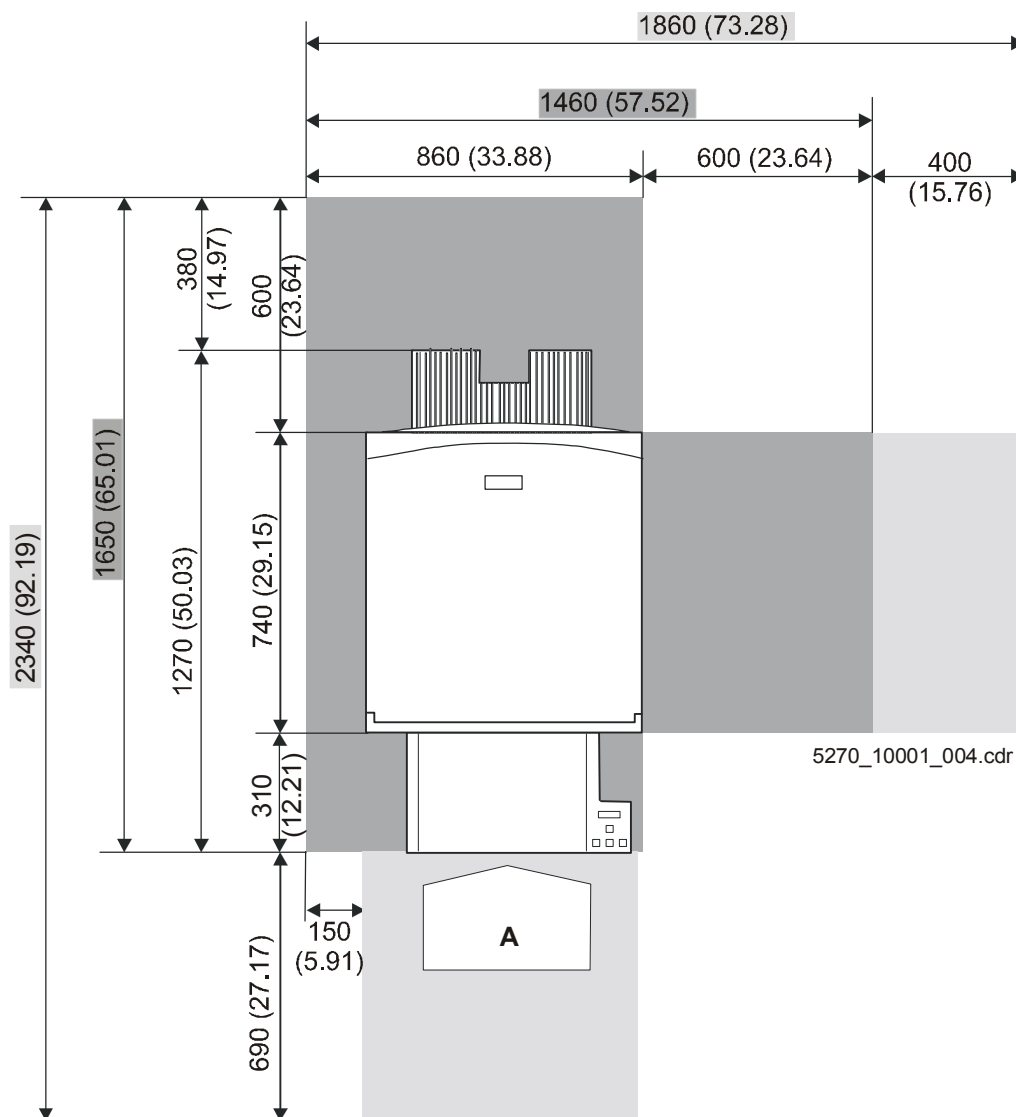


Figure 5

(A) Operation side
Dimensions in mm (inch)

6.2

Classic E.O.S. CL Type 5270/105



The required floor space for the film processor in combination with the Laser Imager LR3300, feed table, chute and the required clearance on the left is 1700 x 860 mm (66.98 x 33.88 inch).

In case of an installation of the Laser Imager LR3300 or another daylight system observe the installation documentation enclosed with the machine.

The free space indicated in the illustration must be guaranteed for repair and maintenance, otherwise the time required for service will increase.

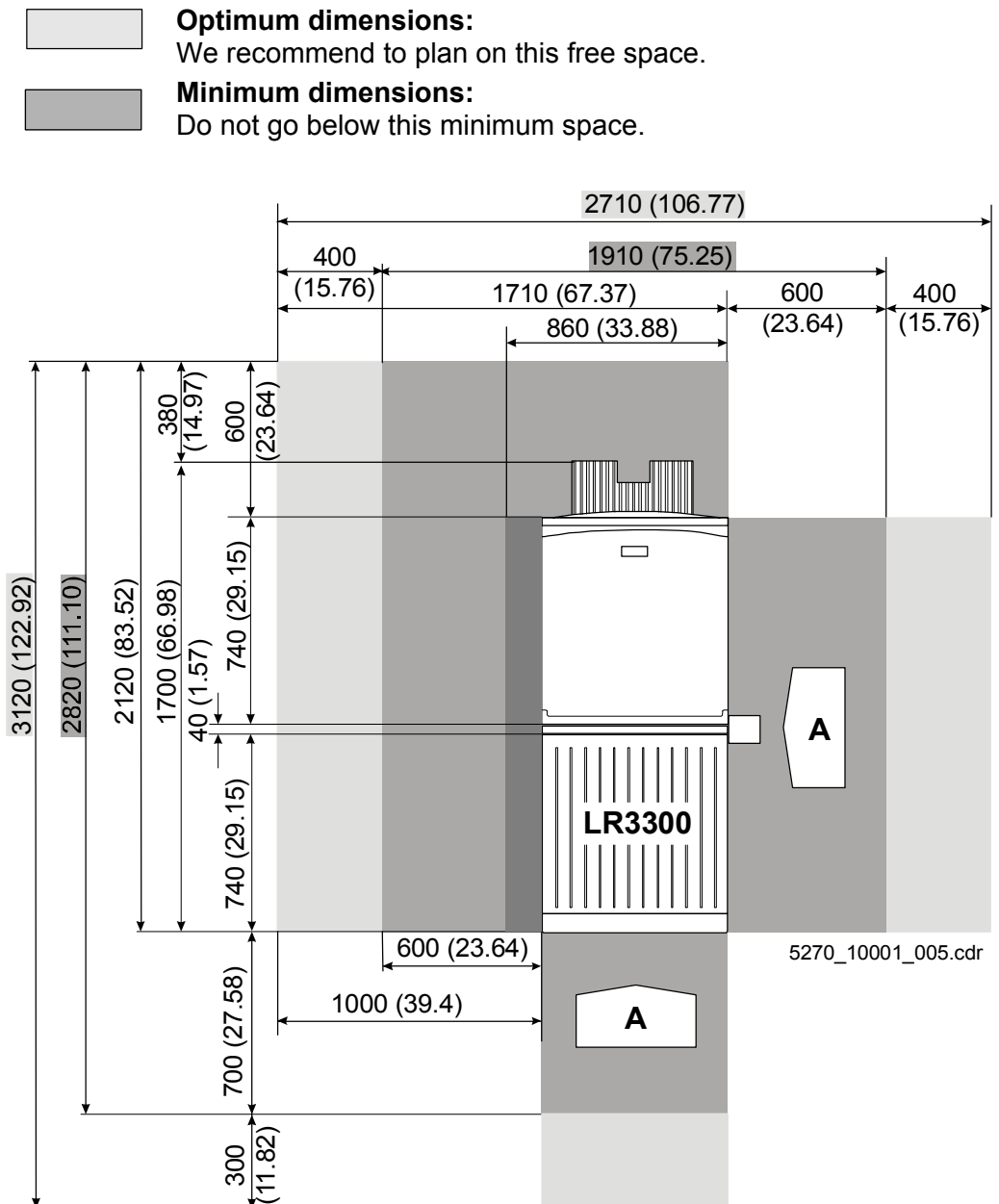


Figure 6

(A) Operation side
Dimensions in mm (inch)

7

Daylight / Darkroom Installation (only Classic E.O.S. Type 5270/100)



Chapter 7 "Daylight / Darkroom Installation" only refers to the Standalone Version Type 5270/100.

Type 5270/105 has been designed for installation as daylight system.

7.1

Machine in the daylight, film feed in the darkroom, light seal at the darkroom feed table

7.1.1

Installation at the wall opening



- ① Film feed
- ② Film output (wire chute)
- ③ A 60° chamfer must be provided on the wall opening.
- ④ Wall
- ⑤ Wall base
- ⑥ Light seal (foam rubber – by the meter)
Order no. CM+0000014259

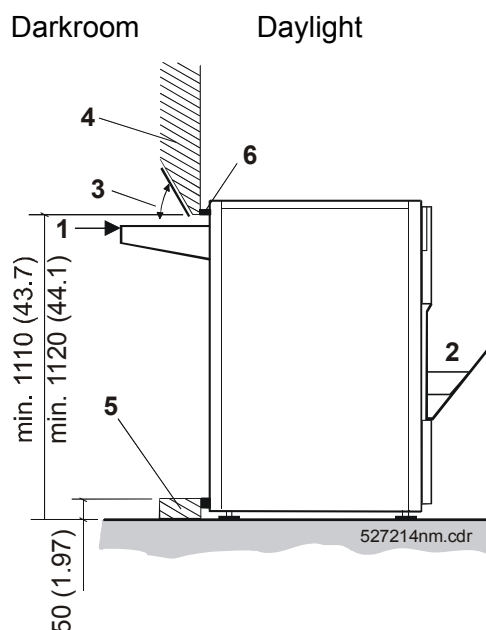


Figure 7

Dimensions in mm (inch)

Wall opening:

- ① Wall
- ② Wall base
- ③ Wall opening

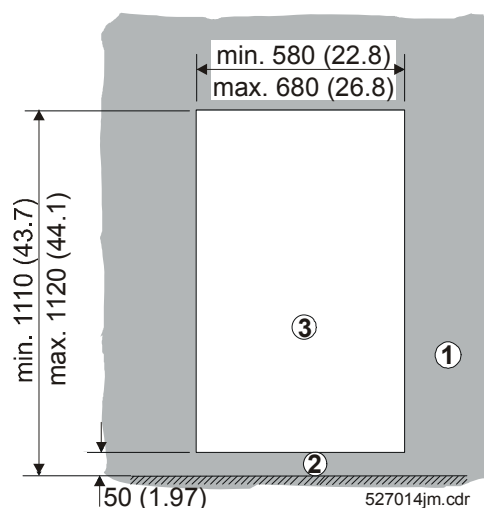


Figure 8

Dimensions in mm (inch)

7.1.2 Installation with light tight wall



- ① Film feed
- ② A 60° chamfer must be provided on the wall opening.
- ③ Wall
- ④ Light tight wall
- ⑤ Film output (wire chute)
- ⑥ Wall base
- ⑦ Light seal (foam rubber – by the meter)
Order no. CM+0000014259

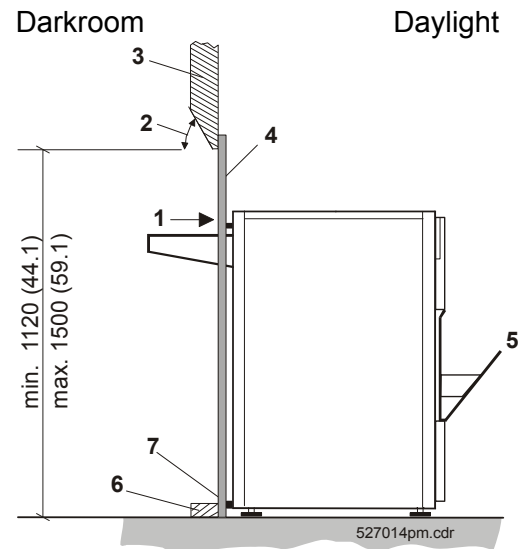


Figure 9

Dimensions in mm (inch)

Wall opening

- ① Wall
- ② Overlap wall / light tight wall at least 5 cm on all sides
- ③ Wooden board, 20 mm (0.79 inch) with opening

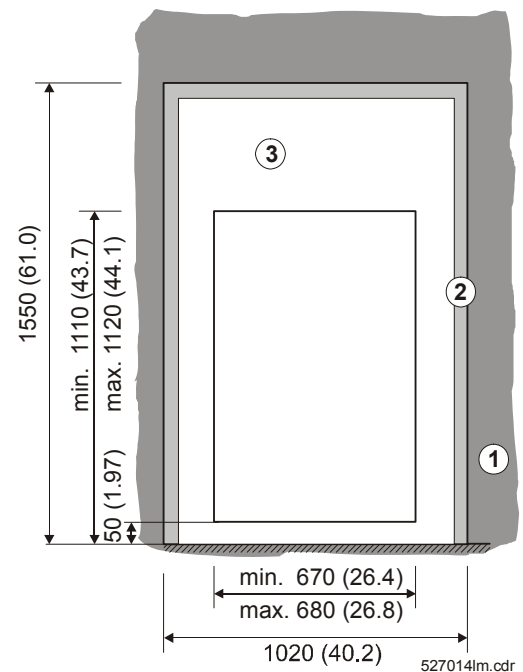


Figure 10

Dimensions in mm (inch)



See 7.3, Light tight wall

7.2 Machine in the darkroom, film exit in the daylight, light seal at the dryer with light tight wall

7.2.1 Installation at the wall opening with light tight wall



- 1 Film feed
- 2 Wall
- 3 A 60° chamfer must be provided on the wall opening.
- 4 Light tight wall
- 5 Film output (wire chute)
- 6 Light seal (foam rubber – by the meter)
Order no. CM+0000014259
- 7 Wall base

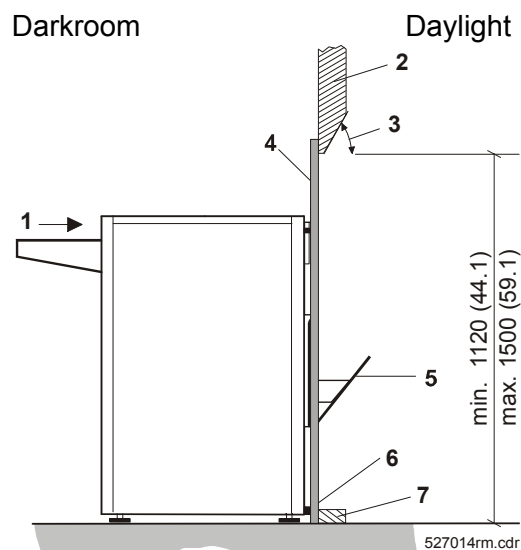


Figure 11

Dimensions in mm (inch)



The lower the height of the wall opening the more difficult will be the access to the film removal.

Wall opening

- 1 Wall
- 2 Overlap wall / light tight wall at least 50 mm (1.97 inch) on all sides
- 3 Wooden board, 20 mm (0.79 inch) with opening

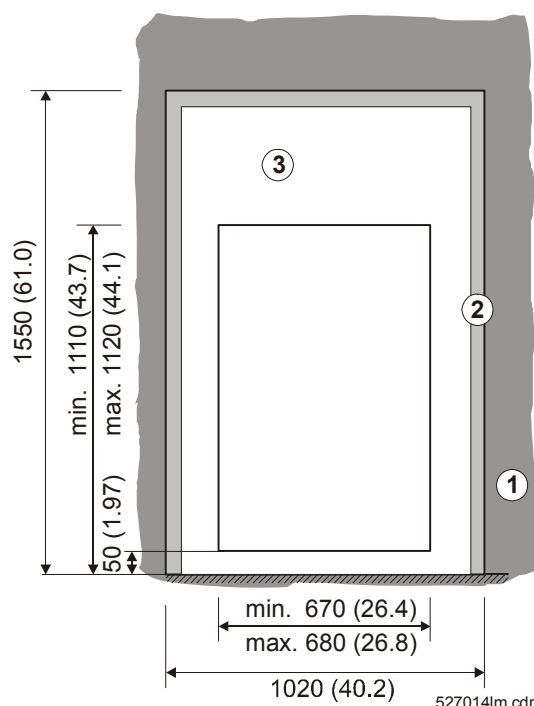


Figure 12

Dimensions in mm (inch)



See 7.3, Light tight wall

7.3

Light tight wall

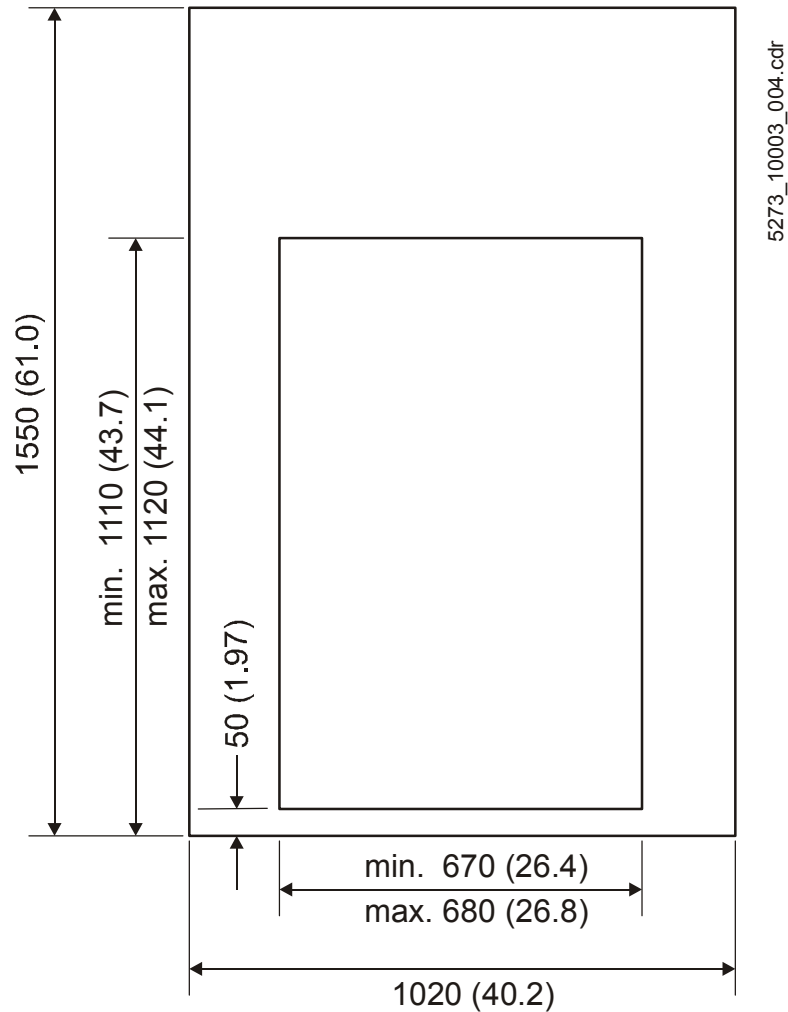


Figure 13

Dimensions in mm (inch)

Coverage of a wall opening of up to 1400 mm x 900 mm (55.16 inch x 35.46 inch) is possible.

An overlap of 50 mm (1.97 inch) must be guaranteed on all sides.



The manufacturer does not supply the light tight wall (wooden board) required for the installation of a film processor!

8

Installation

8.1

Hoses and installation material



Only use **fiber-reinforced** PVC hoses Ø 19x4 mm for the external hose connections (outside the machine)!



The supply and disposal hoses for developer, fixer, water, and safety overflow in the machine are marked by tapes:

DEV = developer

WAT = water

FIX = fixer

OVERFLOW = safety overflow

Tapes to be wrapped around external hoses are included in the accessory box.

The following hoses are to be used for the supply connections:

| Supply connection | Color | Dimensions (mm / inch) | Order number |
|-------------------|------------|--------------------------------------|---------------|
| Developer | red (DEV) | 10x3 / 0.39x0.12 fiber-reinforced | CM+0000064082 |
| Fixer | blue (FIX) | 10x3 / 0.39x0.12 fiber-reinforced | CM+0000064083 |

The following hoses are to be used for the disposal connections:

| Disposal connection | Color | Dimensions (mm / inch) | Order number |
|-----------------------|-------------------|--------------------------------------|---------------|
| Developer | red (DEV) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000064133 |
| Fixer | blue (FIX) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000064134 |
| Water safety overflow | transparent (WAT) | 19x4 / 0.75x0.16 fiber-reinforced | CM+0000007620 |

The accessory box includes an approx. 50 cm (19.69 inch) long PAP hose **for the exhaust connection**.

The PAP hose (Ø 100 mm / Ø 3.94 inch) can be ordered by the meter:

Order number CM+0000064117

| | | |
|---|--------|---------------|
| Hose clamp | Supply | CM+9037170090 |
| Disposal | | CM+9037200400 |
| Exhaust | | CM+7037196490 |
| Hose connection | Supply | CM+9521075161 |
| Disposal | | CM+9521075041 |
| Threaded bush | | CM+9521075050 |
| Y – connector | | CM+9034200440 |
| Exhaust connection Ø 100 mm (3.93 inch) | | CM+9522030091 |
| Order an additional joint for the floor connection! | | |

8.2 Supply and disposal through the lower front panel (only Classic E.O.S. Type 5270/100)

8.2.1 Instructions for breaking out the openings



- It is **not** necessary to remove the front panel in order to break out the openings.
- Mark the recesses to be broken out with a felt-tip marker.
- The material can be broken out by holding a screwdriver against the groove and hitting it with a hammer.

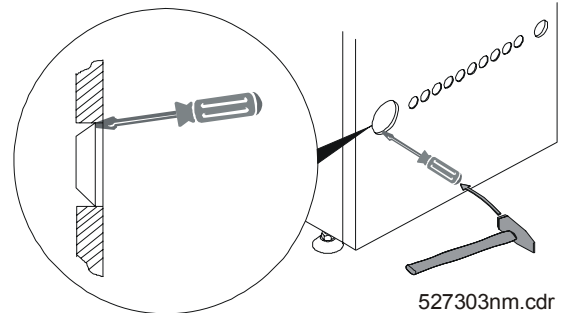


Figure 14

8.2.2 Required openings for standard installations



- (A) Exhaust connection
- (B) Developer overflow / drain
- (C) Fixer overflow / drain 1
- (D) Water overflow / drain
- (E) Safety overflow, tanks
- (F) Developer supply
- (G) Fixer 2 supply
- (H) Water supply

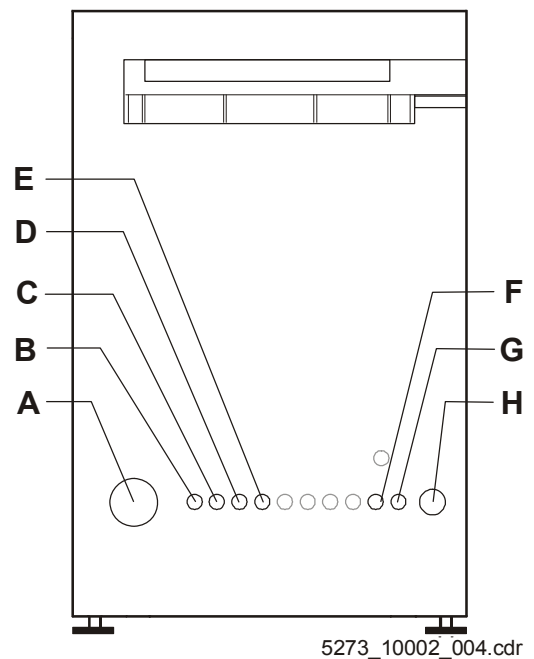


Figure 15

8.2.3

Installing the developer / fixer supply hoses



Only use **fiber-reinforced** PVC hoses Ø 10x3 mm (0.39x0.12 inch) for the external hose connections (outside the machine)!

Position the hoses **without kinks**!

Installing the developer / fixer supply:

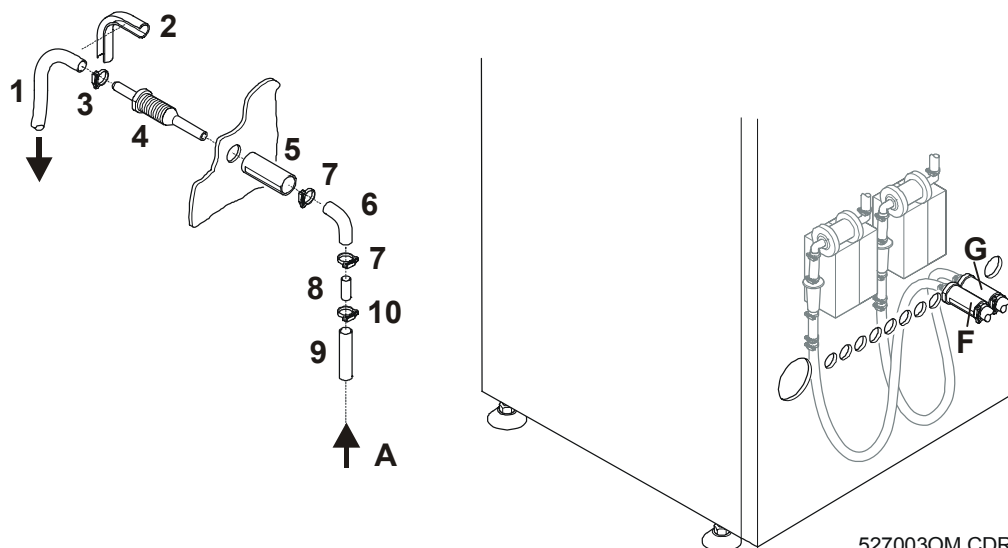


Figure 16

(F) Developer (DEV) (A) Supply direction
(G) Fixer (FIX)

| POS | Designation | Configuration |
|-----|---|--|
| 1 | PVC hose Ø 9x1.5 mm (0.35x0.06 inch) | Pre-installed in the machine |
| 2 | Hose positioning / reinforcement bend-protection | Not included in shipment, can be ordered, CM+7946064580 |
| 3 | Hose clamp | Pre-installed in the machine |
| 4 | Hose connection stub | |
| 5 | Threaded bush | Included in the accessory box |
| 6 | Rubber elbow Ø 10 mm (0.39 inch) | Not included in shipment, can be ordered, CM+9511017970 |
| 7 | Hose clamp | Not included in shipment, can be ordered, CM+7037200210 |
| 8 | Pipe stub Ø 10x1 mm (0.39x0.04 inch) | Not included in shipment, can be ordered, CM+9511017920 |
| 9 | PVC hose Ø 10x3 mm (0.39x0.12 inch) fiber-reinforced Developer: red Fixer: blue | Not included in the shipment, can be ordered, CM+0000064082 CM+0000064083 |
| 10 | Hose clamp | Not included in shipment, can be ordered, CM+9037200230 |

8.2.4 Installing the disposal hoses



Only use **fiber-reinforced** PVC hoses Ø 19x4 mm (0.75x0.16 inch) for the external hose connections (outside the machine)!

Position the hoses **without kinks**!

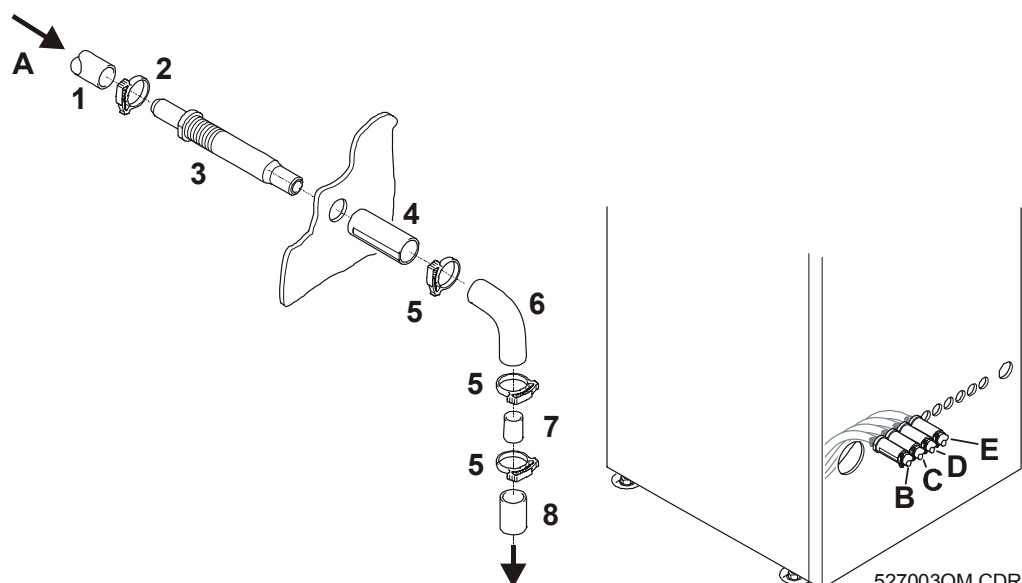


Figure 17

- | | | | |
|-----|----------------------------|-----|------------------------|
| (A) | Drain direction | (D) | Water drain / overflow |
| (B) | Developer drain / overflow | (E) | Safety overflow, tanks |
| (C) | Fixer drain / overflow | | |

| Pos | Designation | Configuration |
|-----|--|---|
| 1 | PVC hose Ø 19x2.5 mm (0.75x0.10 inch) transparent | Pre-installed in the machine |
| 2 | Hose clamp | |
| 3 | Hose connection stub Ø 20 mm (0.79 inch) | |
| 4 | Threaded bush | Included in the accessory box |
| 5 | Hose clamp | Not included in shipment, can be ordered, CM+9037200400 |
| 6 | Rubber elbow | Not included in shipment, can be ordered, CM+9889629521 |
| 7 | Pipe stub Ø 20 mm (0.79 inch) | Not included in shipment, can be ordered, CM+7839185010 |
| 8 | PVC hose, Developer (red, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Fixer (blue, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Water (transparent, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) | Not included in shipment, can be ordered CM+0000064133 CM+0000064134 CM+0000007620 |

- Combine the hoses of the safety overflow (OVERFLOW) and water (WAT) with a Y piece and connect them with one drain hose, if this is permitted by the local regulations. Install the drain hose to the floor drain.

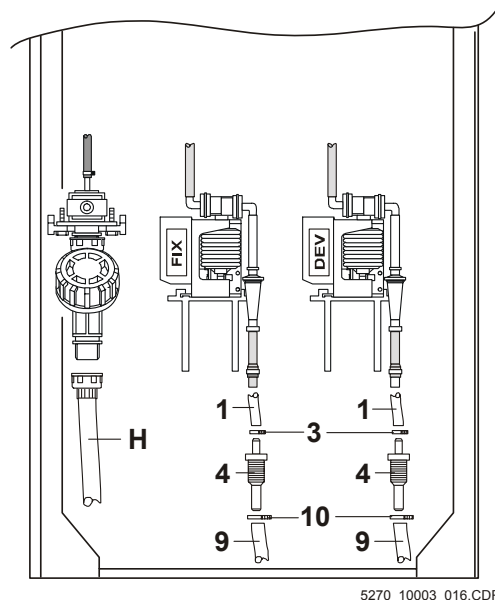
8.3

Supply and disposal through the floor



Only use **fiber-reinforced** PVC hoses Ø 10x3 mm (0.39x0.12 inch) for the external hose connections (outside the machine)!
Position the hoses **without kinks**!

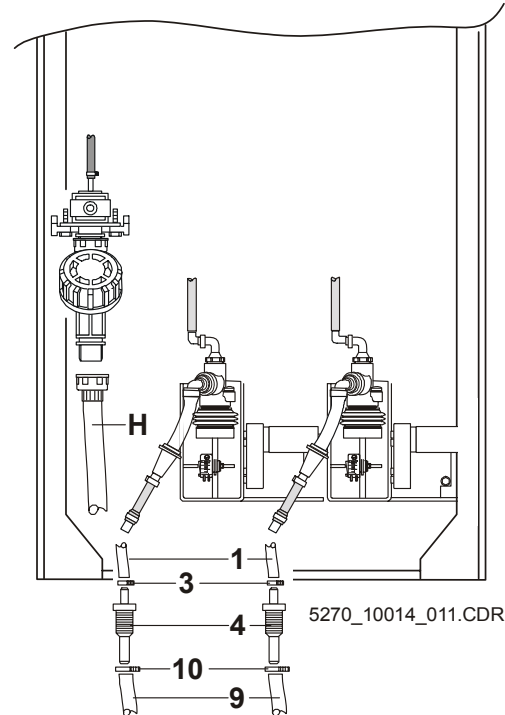
Classic E.O.S. (5270/100)



5270_10003_016.CDR

Figure 18

Classic E.O.S. CL (5270/105)



5270_10014_011.CDR

Figure 19

| Pos | Designation | Configuration |
|-----|---|---|
| 1 | PVC hose Ø 9x1.5 mm (0.35x0.06 inch) | Pre-installed in the machine |
| 3 | Hose clamp | |
| 4 | Hose connection stub | |
| 10 | Hose clamp | Not included in shipment, can be ordered, CM+9037200230 |
| 9 | PVC hose Ø 10x3 mm (0.39x0.12 inch) fiber-reinforced Developer: red Fixer: blue | Not included in the shipment, can be ordered, CM+0000064082 CM+0000064083 |
| H | Safety pressure hose | Included in the accessory box |

- If necessary shorten the internal supply hoses and insert the hose connection stub (4) again.
- Connect the fiber-reinforced (external) PVC hoses with the hose connection stub (4) of the internal supply hoses.
- Position the hoses together through the opening in the bottom to the mixer or to the individual tanks.

8.3.1

Installing the disposal hoses

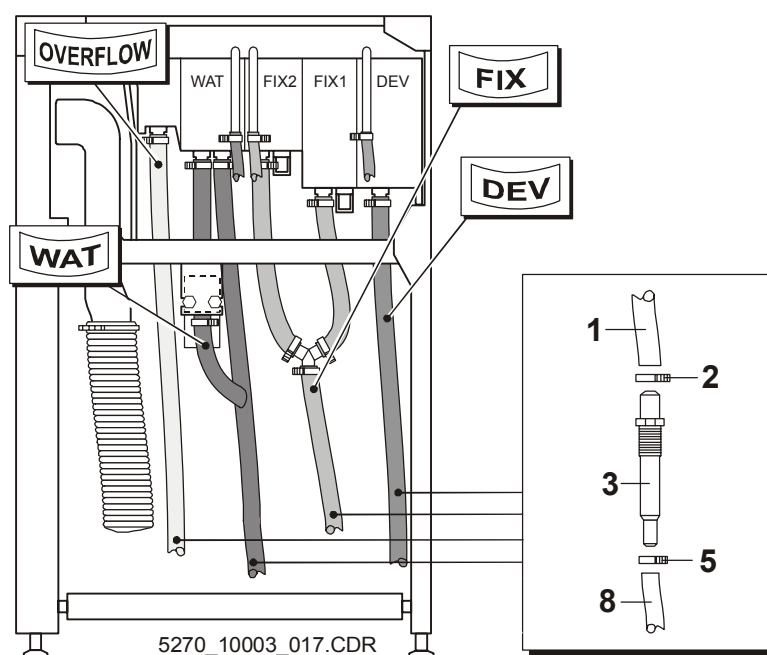


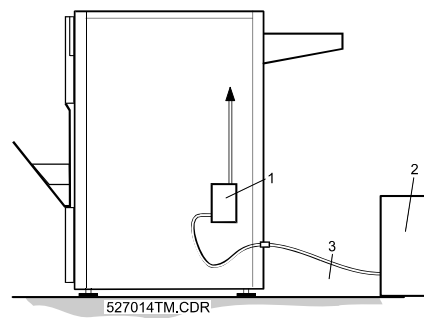
Figure 20

| Pos | Designation | Configuration |
|-----|--|---|
| 1 | PVC hose Ø 19x2.5 mm (0.75x0.10 inch) transparent | Pre-installed in the machine |
| 2 | Hose clamp | |
| 3 | Hose connection stub Ø 20 mm (0.79 inch) | |
| 5 | Hose clamp | Not included in the shipment, CM+9037200400 |
| 8 | PVC hose, Developer (red, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Fixer (blue, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) Water (transparent, fiber-reinforced): Ø 19x4 mm (0.75x0.16 inch) | Not included in shipment, can be ordered CM+0000064133 CM+0000064134 CM+0000007620 |

- Shorten the internal disposal hoses if necessary and insert the hose connection stub (3) again.
- Connect the fiber-reinforced (external) PVC hoses with the hose connection stub (3) of the internal disposal hoses.
- Position the disposal hoses of developer (DEV) and fixer (FIX) together through the opening in the bottom and to the central disposal site.
- Combine the hoses of the safety overflow (OVERFLOW) and water (WAT) with a Y piece and connect them with one drain hose, if this is permitted by the local regulations. Install the drain hose to the floor drain.

8.4

Replenisher tanks for developer and fixer



- ① Replenisher pump with filter
- ② Replenisher tanks or Mixer
- ③ Replenisher hose

Figure 21

- To be observed for the use of individual tanks or a mixer:
 - maximum **suction height**: 2 m (78.74 inch)
 - maximum **suction length**: 15 m (590.55 inch)



Replenisher tanks must not be installed inside the machine!
The customer cannot refill the tanks!

Level monitoring in the replenisher tanks

Four plugs are provided on the Control Board PCB1 for connection of the replenisher supply for mixer, developer, fixer, and for the anti-algae solution.

A communication cable with 20 m (787.4 inch) can be ordered for the Mixer:
CM+9528030301

8.5

Disposal tanks

For disposal of chemicals and wash water the regulations of the local authorities regarding the pertaining Sewage Act must be observed!

If it is allowed to drain the exhausted solutions into the sewer, then the drain pipe must be a polyethylene pipe up to the main pipe (vertical drain pipe).

The installation of the disposal lines to the disposal tanks must be carried out professionally by authorized technicians.

In Germany this must be done in compliance with §19 WHG and DIN 1988 / EN 1717:2001. In other countries the corresponding national regulations must be considered.

It must be guaranteed that developer or fixer solution never gets into the wash water, not even in case of overflow due to clogged lines, if the wash water is drained into the public sewage system. Install the respective hoses and protection facilities.

In Germany the pertaining regulations are the general minimum requirements for the disposal of waste water in waters, dated Jan. 31, 1994, Appendix 53 – Photographic Processes (silver halide photography). In other countries the respective country-specific regulations and laws must be observed.

Disposal possibilities**Disposal through the front panel
(only type 5273/100):**

Disposal connections through the lower front panel:

- Disposal in individual tanks (developer / fixer), and water is drained in the sewer, or
- Disposal in centralized disposal station

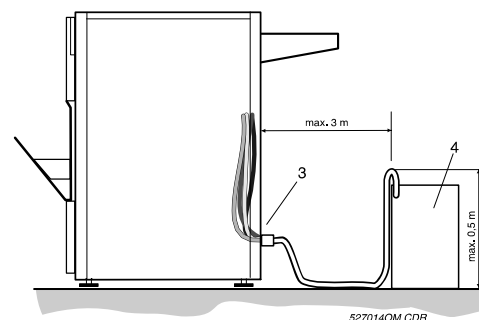


Figure 22

- ③ Disposal connections through the lower front panel
- ④ Disposal tanks



In case of a disposal with individual tanks, the disposal hoses are always filled with chemicals.

Disposal through the floor:

Disposal through the floor to the centralized disposal station with one disposal hose each for developer, fixer, and water.

For maintenance purposes we recommend a separate drain for cleaning chemicals.

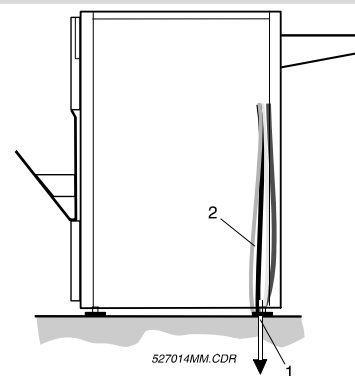


Figure 23

- ① Centralized disposal
- ② Drain hoses (below the film processor)

8.6

Water connection

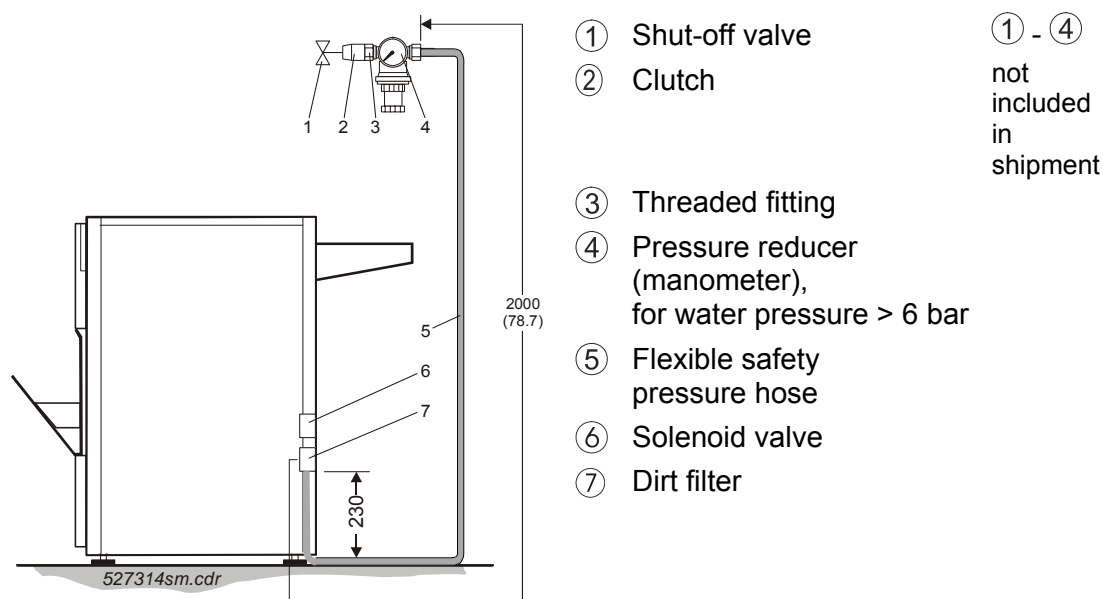


Also see Chapter 3

| | |
|---------------------------------|---|
| Water consumption | Permanent replenishment: max. 3 liters / min (101.45 fl.oz. / min). The water supply rate per square meter of processed film can be changed via code. |
| Water pressure | 2 bar (200 kPa) to 6 bar (600 kPa) |
| Water temperature | min. 5 °C |
| pH value | 6.5 to 8 |
| Water conductivity value | min. 3µS/cm Reliable level detection in the water tank cannot be guaranteed if this value is too low. |

Regulations

The free water supply of the machine is in compliance with the regulations of DIN 1988 / EN 1717:2001 (technical regulations for the installation of drinking water).



Dimensions in mm (inch)
Figure 24

- Position the safety pressure hose, mounted at the dirt filter, all the way to the shut-off valve or pressure reducer.
Safety pressure hose: CM+9036260160
tested in compliance with DIN 57700 Part 600
2 m (78.74 inch) long
3/4" union nut
- For safety we recommend to provide a floor drain close to the machine.

8.6.1

Wall / machine connection at a water pressure of 2 – 6 bar

To protect the drinking water from a return flow of waste water via the hand shower a safety fitting (1) must be installed. This consists of a ventilation valve with integrated check valve. The installation according to the standard DIN 1988 / EN 1717:2001 must follow the illustration!

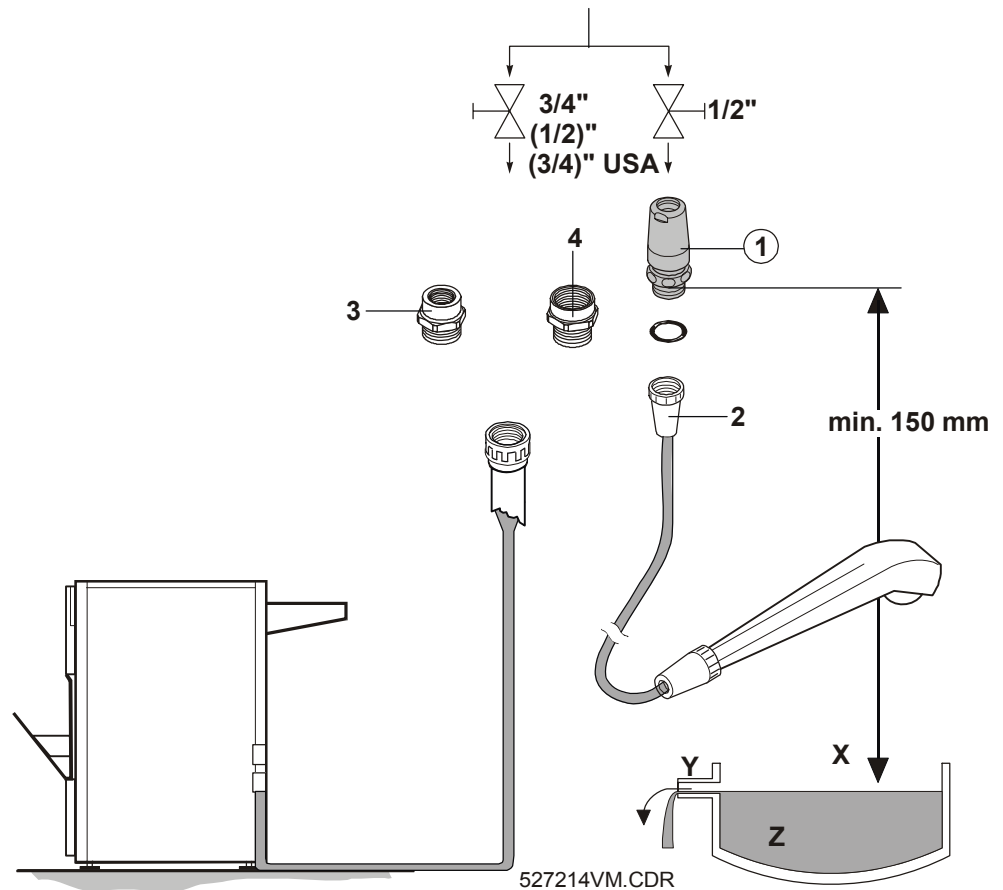


Figure 25

If necessary the individual assemblies must be supported.

X Cleaning sink
Y Overflow
Z Waste water

| Pos. | Part number | Qty | Designation | Size | Remarks |
|------|---------------|-----|-------------------------------------|----------|----------|
| ① | FU+8966008 | 1 | Safety combination, chromium plated | 1/2" | optional |
| 2 | FU+58618 | 1 | Hand shower with hose | 1/2" | |
| 3 | CM+9034200580 | 1 | Hexagon reduction piece (brass) | 3/4" USA | |
| 4 | CM+9034200590 | 1 | Hexagon reduction piece (brass) | 3/4" | |

8.6.2

Wall / machine connection at a water pressure > 6 bar

To protect the drinking water from a return flow of waste water via the hand shower a safety fitting (1) must be installed. This consists of a ventilation valve with integrated check valve. The installation according to the standard DIN 1988 / EN 1717:2001 must follow the illustration!



Set the pressure reducer to a pressure value between 2 and 6 bar!

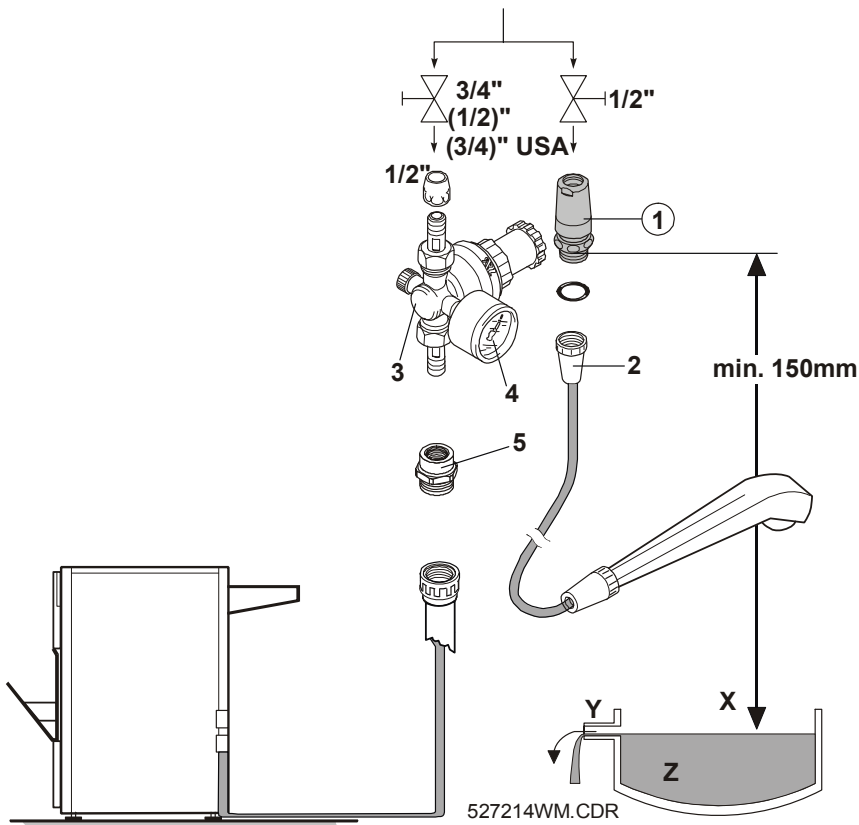


Figure 26

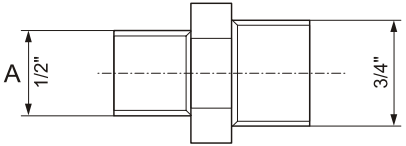
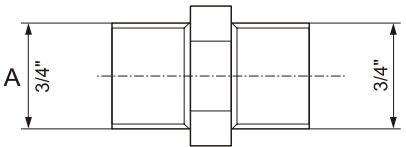
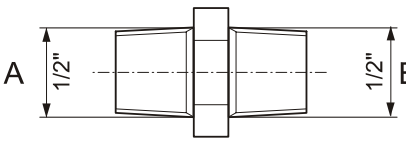
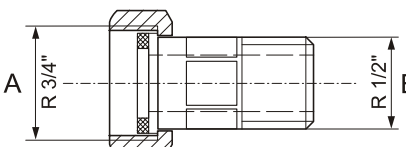
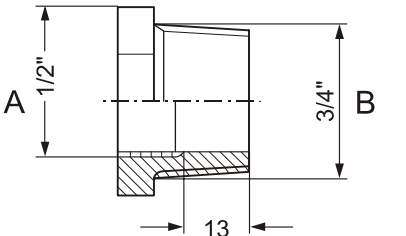
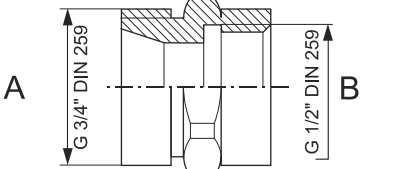
If necessary the individual assemblies must be supported.

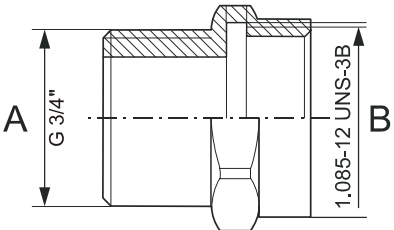
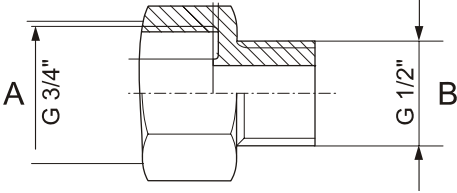
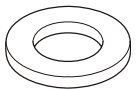

| | |
|---|---------------|
| X | Cleaning sink |
| Y | Overflow |
| Z | Waste water |

| Pos. | Part number | Qty | Designation | Dimensions | Remarks |
|------|---------------|-----|-------------------------------------|------------|----------|
| ① | FU+8966008 | 1 | Safety combination, chromium plated | 1/2" | |
| 2 | FU+58618 | 1 | Hand shower with hose | 1/2" | |
| 3 | FU+8656001 | 1 | Pressure reducer SYR 315 | 1/2" | optional |
| 4 | FU+8656002 | 1 | Manometer 0 - 10 bar | 1/2" | |
| 5 | CM+9034200590 | 1 | Hexagon reduction piece (brass) | 3/4" | |

8.6.3

Overview of adaptation parts for water installations:

| Adaptation part with name | Connection | Order number/ part number |
|--|--|------------------------------|
|  <p>Reduction nipple (brass)</p> | A 1/2 " external thread B 3/4 " external thread | CM+7034200320 |
|  <p>Double nipple (brass)</p> | A 3/4 " external thread B 3/4 " external thread | CM+9034200600 |
|  <p>Double nipple (brass, chromium plated)</p> | A 1/2 " external thread B 1/2 " external thread | CM+7034200260 |
|  <p>Reduction piece with seal (movable parts; brass, chromium plated)</p> | A 3/4 " internal thread + seal B 1/2 " external thread | CM+7034215230 |
|  <p>Reduction nipple (brass)</p> | A 1/2 " internal thread B 3/4 " external thread | CM+7034200280 |
|  <p>Reduction piece (brass)</p> | A 3/4 " external thread B 1/2 " internal thread | CM+9034200590 |

| Adaptation part with name | Connection | Order number/ part number |
|--|--|---|
|  <p>Reduction piece (fitting for USA)</p> | <p>A $\frac{3}{4}$ " external thread</p> <p>B 1.085-12 UNS-3B internal thread PIPE THREADS American National Standard</p> | CM+9034200580 |
|  <p>Reduction piece (brass, compact part)</p> | <p>A $\frac{3}{4}$ " internal thread</p> <p>B $\frac{1}{2}$ " external thread</p> | CM+7523010550 |
|  <p>Flat seal</p> | <p>for</p> <p>$\frac{1}{2}$ " screw connection</p> <p>$\frac{3}{4}$ " screw connection</p> | <p>CM+9896611740</p> <p>CM+9034200610</p> |
|  <p>Pressure hose</p> | <p>A $\frac{3}{4}$" union nut</p> <p>B $\frac{3}{4}$" union nut</p> | CM+9036260160 |

8.7 Exhaust connection



Also see Chapter 3

8.7.1 Exhaust connection through lower front panel (only Type 5270/100)

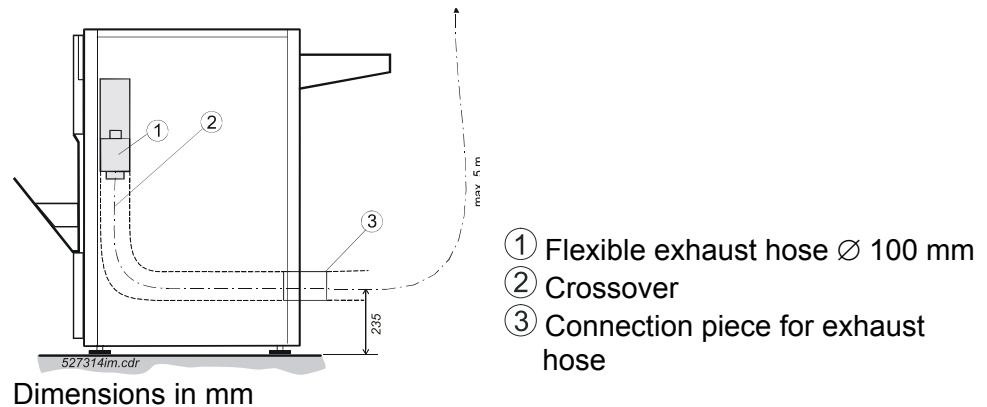


Figure 27

The film processor has an integrated exhaust unit.

- Connection stub at the machine: \varnothing 100 mm
- Max. length of the exhaust hose: 5 m.
If the hose is longer install an additional fan!
- Exhaust volume:
min. 50 m³/h – max. 100 m³/h

For functional reasons the exhaust connection must always lead out of the machine.

8.7.2

Exhaust connection through the floor

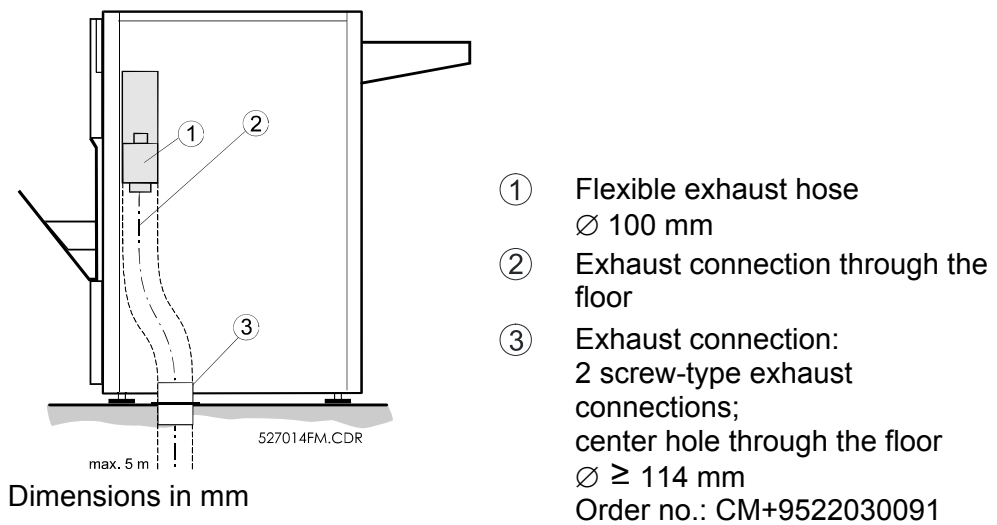


Figure 28

The film processor has an integrated exhaust unit.

- Connection stub at the machine: Ø 100 mm
- Max. length of the exhaust hose: 5 m
If the hose is longer install an additional fan!
- Exhaust volume:
min. 50 m³/h – max. 100 m³/h

For functional reasons the exhaust connection must always lead out of the machine.

8.8

Electrical connection of the machine

| | |
|--|---|
| Power connection | 1N~ 230 – 240 V; 50/60 Hz (200 - 240 V) |
| Fuse protection | 15 / 16 A |
| | A GFI switch: ($I_N = 30$ mA in compliance with VDE 664) is integrated in the machine. |
| Leakage current towards PE | < 3.5 mA |
| Protective earth | < 0.1 Ω towards ground |
| Installation regulations | <p>VDE Electrical installations in the installation room must be in compliance with the regulations IEC 364, VDE 0100 and VDE 0107.</p> <p>UL Electrical installations in the installation room must be in compliance with the regulation "National Electrical Code" (NEC) (NFPA 70).</p> |
| Mains connection in the installation room | <p>VDE Double shockproof outlet according to DIN 49441 and CEE 7 standard plate VII</p> <p>UL Outlet for three-prong plugs NEMA 6-20 R</p> |
| Required connection cable (scope of delivery) | <p>VDE PVC line H05VV - F 3G 1.5 (3 wires)</p> <p>cable length 3.5 m</p> <p>usable length 2.3 m</p> <p>UL Cable included in the accessory box to replace the VDE cable.</p> <p>PVC line SJT 3 x AWG 12 (with plug NEMA 6-20 P)</p> <p>cable length 3.4 m</p> <p>usable length 2.4 m</p> |
| Main breaker | Upon machine installation it must be ensured that either the mains connector or an all-pole circuit breaker for the installation on site is located close to the machine and easily accessible. |

Outlet connection:

- ① All-pole main breaker
(option: if there is no access
to the outlet)
- ② Mains supply with outlet
- ③ Power cable with three-prong
plug
- ④ GFI switch
($I_N = 30 \text{ mA}$, in compliance
with VDE 664)

Note:

Parts ① and ② are not
included in the machine
shipment.

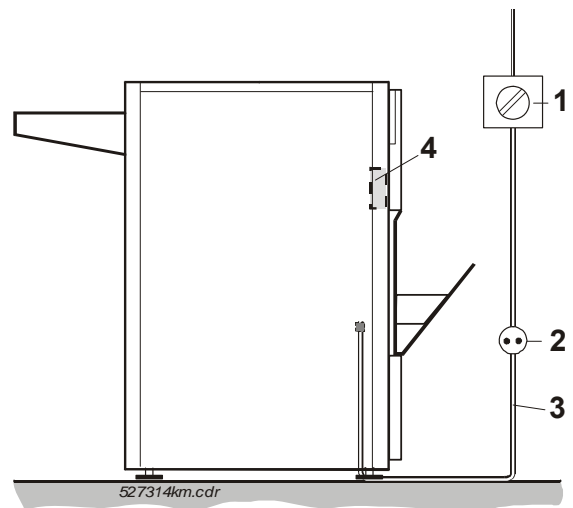



Figure 29

9 Technical Data

9.1 Electrical data

| | |
|---|--|
| Power connection | 1N~ 230 – 240 V; 50/60 Hz (200 - 240 V) |
| Power consumption: Standby (room temperature ~ 20 °C) during film processing | 0.45 kWh (1620 kJ) 2.9 kW/h (10440 kJ/h) |
| Fuse protection | 15 A / 16 A |
| Leakage current towards PE | < 3.5 mA |
| Main breaker | Upon machine installation it must be ensured that either the mains connector or an all-pole circuit breaker for the installation on site is located close to the machine and easily accessible. |
| Safety regulations | Electrical installations in the installation room must be in compliance with IEC 364 (VDE 0100 / 0107). A GFI switch: ($I_N = 30$ mA in compliance with VDE 664) is integrated in the machine. |

9.2 Ambient and climatic conditions

| | |
|--|--|
| Room temperature | min. 10 °C (50 °F), max. 30 °C (86 °F) Room temperature min. 5 °C (41 °F) below the set developer temperature |
| Relative humidity | min. 10 %, max. 80 %, no condensation |
| Ventilation | Avoid inhaling of chemical fumes. Make sure that there is sufficient ventilation at the installation site of the machine, i.e. an air exchange that is at least ten times the room volume per hour. |
| Light-tightness | maximum 2500 Lux  The machine must not be opened during the operation. It is light tight only if all panels are correctly mounted. |
| Acoustic test ISO 7779 (airborne noise) | during standby max. 35 dB (A) during film cycle max. 48 dB (A) |

| | | | |
|---------------------------------------|--|---|--------------------|
| Radiation effects | Upon machine installation in the close vicinity to the X-ray room, the local regulations for radiation protection must be followed (protection of personnel against scattered radiation). The machine has not been designed for the installation in the X-ray room, i.e. there is no internal screening against scattered radiation. | | |
| Floor conditions | Waterproof, chemical-resistant floor covering (pH value 4 - 11) A floor drain close to the film processor is recommended. | | |
| Floor load | 50 N / cm ² (7.75 N / in ²) | | |
| Cleaning sink | A cleaning sink with water tap and hose shower should be provided for maintenance work. Minimum inside dimensions of the sink: Width 70 cm (27.56 inch) Depth 40 cm (15.75 inch) Height 20 cm (7.87 inch) | | |
| Heat emission (approx. values) | Standby (max.) | into the room | 250 W / 900 kJ/h |
| | Film run (max.) | into the connected exhaust | 1200 W / 4320 kJ/h |
| | | into the room | 900 W / 3240 kJ/h |
| | | total | 2100 W / 7560 kJ/h |
| | Exhaust connect. | Integrated exhaust in the dryer is a standard feature. During film cycle the exhaust runs at full capacity. During standby mode the exhaust can be set to half-capacity via the service program. | |

9.3

Transport and storage conditions

| | | |
|--|----------------------------|-------------------|
| Ambient temperature | up to max. -25 °C for 72 h | (IEC 68-2-1 (Ab)) |
| | max. 55 °C for 96 h | (IEC 68-2-2 (Bb)) |
| Relative humidity in the given temperature range between 5% and 95%. | | |

10 Machine Specifications

10.1 Type overview

| Machine | Type | Power connection | ABC Code |
|-------------------|----------|---|----------|
| Classic E.O.S. | 5270/100 | 1N~ 230-240 V (200 - 240 V) 50/60 Hz | ECZ26 |
| Classic E.O.S. CL | 5270/105 | 1N~ 230-240 V (200 - 240 V) 50/60 Hz | ECZ38 |

10.2 Film types

All commercially available medical x-ray films suitable for machine processing.

10.3 Film formats

Type 5270/100

| | | |
|-------------|---|-------------------------------|
| Sheet films | smallest size | 10 x 10 cm (3.9 x 3.9 inch) |
| | largest size | 35 x 43 cm (13.8 x 16.9 inch) |
| | max. film width | 43.5 cm (17.1 inch) |
| Roll film | Processing of roll film is NOT possible! | |

Type 5273/105

| | | |
|-------------|---|-------------------------------|
| Sheet films | smallest size | 13 x 18 cm (5.1 x 7.1 inch) |
| | largest size | 35 x 43 cm (13.8 x 16.9 inch) |
| | max. film width | 43.5 cm (17.1 inch) |
| Roll film | Processing of roll film is NOT possible! | |

10.4 Functional data

| Process code | HT (60s) | IP (90s) | RP (2min) | EXT (3min) |
|--|--|------------------------------|----------------------------|-----------------------------|
| Feeding speed | 160 cm/min (62.99 in/min) | 106 cm/min (41.73 in/min) | 80 cm/min (31.5 in/min) | 52 cm/min (20.47 in/min) |
| Processing time in DEV | 12.5 sec | 18.8 sec | 24.9 sec | 38.3 sec |
| Processing time (film 35 x 35 cm) | 71 sec | 107 sec | 142 sec | 218 sec |
| Film: end / end incl. Film | 82 sec | 124 sec | 164 sec | 253 sec |
| Films / h (35 x 35 cm) | 220 | 150 | 110 | 75 |
| Machine tank volumes | | | | |
| Developer | 8.8 l (297.6 fl.oz.) | | | |
| Fixer 1 | 10 l (338.18 fl.oz.) | | | |
| Fixer 2 | 5.8 l (196.15 fl.oz.) | | | |
| Water | 5.8 l (196.15 fl.oz.) | | | |
| Developer tank temperature standard adjustable between 25 °C (77 °F) - 39 °C (102.2 °F) | 38 °C (100.4 °F) | 36 °C (96.8 °F) | 34 °C (93.2 °F) | 34 °C (93.2 °F) |
| Fixer 2 tank temperature | 34 °C (93.2 °F) | | | |
| Heating time from 20 °C (68 °F) to 34 °C (93.2 °F) | approx. 20 min | | | |
| Dryer step setting | 13 (Software Version CLLC1107; older versions: 10 steps) | | | |
| Standard setting replenishment cycles Developer / fixer | 0.25 m ² (3.88 in ²) | | | |
| Standard setting Replenishment rate Developer / fixer Water | 400 ml/m ² 30000 ml/m ² | | | |
| Range Replenishment rate Developer / fixer Water | 50 – 800 ml/m ² 3000 – 30000 ml/m ² | | | |
| Water supply | 3000 ml/min (101.45 fl.oz./min) | | | |
| Adjustment range for water pressure min. max. | 2 bar 6 bar | | | |
| Water conductivity value | min. 3 µS / cm If the value drops below this threshold reliable level detection in the water tank can no longer be guaranteed! | | | |
| Water pH value | 6.5 to 8 | | | |
| Silver concentration in the waste water | < 1 ppm | | | |

11 Dimensions and Weights

11.1 Classic E.O.S. Type 5270/100

Dimensions

| | Length mm (inch) | Width mm (inch) | Height mm (inch) |
|--|---------------------|-----------------|---------------------|
| incl. packing box | 1200 (47.24) | 800 (31.5) | 1460 (57.48) |
| without packing material (with feed table and chute) | 1270 (50) | 710 (27.95) | 1130 (44.49) |

Weight

| | Weight approx. kg (lbs) |
|--------------------------|-------------------------|
| with packing material | 200 (441) |
| without packing material | 135 (297) |
| with full tanks | 165 (364) |

11.2 Classic E.O.S. CL Type 5270/105

Dimensions

| | Length mm (inch) | Width mm (inch) | Height mm (inch) |
|--|---------------------|-----------------|---------------------|
| incl. packing box | 1200 (47.24) | 800 (31.5) | 1460 (57.48) |
| without packing material (with docking unit and chute) | 1070 (42.16) | 710 (27.95) | 1130 (44.49) |

Weight

| | Weight approx. kg (lbs) |
|--------------------------|-------------------------|
| with packing material | 200 (441) |
| without packing material | 135 (297) |
| with full tanks | 165 (364) |

12 Machine Standards and Directives

12.1 Safety

Europe

EN 60950 / A11 1997 "Safety of Information Technology Equipment" (identical with IEC 950: 1992 and with VDE 0805/ 11. 97).

USA

UL 1950 July 3, 1995 "Safety of Information Technology Equipment, Including Electrical Business Equipment".

Canada

CSA 22.2 No. 950 - 95 "Safety of Information Technology Equipment, Including Electrical Business Equipment".

12.2 Radio interference suppression

Europe

In compliance with EN 50081-1: 1992 "Generic Standard for Emission Requirements", (identical with VDE 0839, Part 81-1/ 03. 93)

EN 55011 1998, Class B "Radio Disturbance Characteristics of Medical Equipment" (corresponds to VDE 0878, Part 22 / 04.98)

For equipment in residential areas, business and commercial areas, and in doctors' offices.

North-America (USA, Canada)

US Standard FCC 47 Part 15, Subchapter B, Class A / Edition 8/ 1976
Equipment considered "Non-Household Appliances"

12.3 Electromagnetic compatibility

EMVG (German Electromagnetic Compatibility Act) and

EC Regulation 89 / 336 / EEC; EN 50082-1: 1997

EN 61000-3-2 "Limit Values for Harmonic Emissions"

EN 61000-3-3 "Limit Values for Flicker"

12.4

Certificates and guidelines

| | |
|-----------------------------|-------------------------------|
| CE Medical Device Directive | 93/42 EEC |
| TÜV Product Service Mark | "Design tested and monitored" |
| UL Approbation | E 477 50 (M) |
| C-UL Approbation | E 477 50 (M) |

| | |
|--|---------------------------------------|
| "Technical directives for drinking water installations, protection against reflux" | DIN 1988, Part 4/ 1988 / EN 1717:2001 |
|--|---------------------------------------|

| | |
|--|--|
| General conditions and administrative regulations for minimum requirements on the disposal of waste water into public waters, dated 31.01.1994 (Germany) | Appendix 53 – Photographic Processes (silver halide photography) |
|--|--|

| | |
|---|--|
| Ministry for Environmental Protection (France) | Rubrique No. 2950 Maximum water consumption for - single-layer emulsions must not exceed a maximum of 15l/m ² * - double-sided emulsions must not exceed a maximum of 30l/m ² * * Activated in the program <Service Settings / Replenishment / Wat. Repl. Value> |
|---|--|

13

Checklist for Installation Planning

| General | | | yes | no |
|---|----------------------------------|---|--------------------------|--------------------------|
| 1 | System components | Film processor Daylight system Mixer Replenisher tanks Centralized disposal Disposal tanks Silver recovery (fixer, water) | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Transport path | Sufficient floor load Elevator (door size, load) Door size | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Installation version | Daylight Darkroom | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Unloading and unpacking | Free space provided for lifting the machines off the pallet | <input type="checkbox"/> | <input type="checkbox"/> |
| Required external connections: prepared: yes no | | | | |
| 5 | Film processor | All-pole circuit breaker Outlet (distance to machine: _____m) | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Mixer | Outlet (distance to machine: _____m) | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Silver recovery | Outlet (distance to machine: _____m) | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Hose connections | Supply and disposal through rear wall Supply and disposal through the floor Exhaust hose required, length _____m Exhaust: connection piece installed on site Supply hoses installed Disposal hoses installed | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Air conditioning system | Exhaust connection installed Exhaust rate sufficient | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Water connection | present | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | Free space around machine | Required minimum guaranteed | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Wall opening | considered | <input type="checkbox"/> | <input type="checkbox"/> |

Copyright © 03.2004 DD+DIS303.03E Agfa-Gevaert AG
All rights reserved

Published by

Agfa-Gevaert AG
Fototechnik
Tegernseer Landstraße 161
D - 81539 München

Misprints, errors, and technical modifications reserved

AGFA and the Agfa-Rhombus are trademarks of Agfa-Gevaert AG, Germany

Section 15

comprises of two parts:

- Glossary:
Explanation of special terms and abbreviations
- Key Word Index:
Alphabetic listing of machine specific terms with reference to the section where this term is explained in detail.

Chapter 15

Contents

| | | |
|----------|-----------------------|----------|
| 1 | Glossary | 1 |
|----------|-----------------------|----------|

1

Glossary

| | |
|---------------------|---|
| BASEINIT | Basic Initialization – Resets the parameters of the film processor to default (as delivered ex-factory), all customer specific settings are deleted and must be entered again in the SERVICE program. |
| CE | Communauté Européenne, European Community |
| CEE | Communauté Economique Européenne, European Economic Community |
| CPU | Central Processor Unit, main processor |
| CRT cassette | Cathode Ray Tube (Scopix) cassette |
| CSA | Canadian Standards Association |
| DEV | Developer, abbreviation |
| DIN | Deutsches Institut für Normung, German Standardization Institution |
| DOCKING | Machine version Classic E.O.S. Type 5270/105 designed for operation in connection with Laser Imager LR3300 |
| DUKA table | Darkroom feed table |
| (E)EPROM | (Electrically) Erasable Programmable Read-Only Memory |
| EEC | European Economic Community |
| EMVG / EMC | Electromagnetic compatibility of devices |
| EN | European Norm = European Standard |
| EOS | Ecologically Optimized System – Film processor with double fixer tank system, which reduces the silver carry-over into the water tank considerably. |
| ESD | Electro Static Discharge |
| EXT Process | Extended Process – longest processing time (3min) for top film quality |
| FCC | Federal Communications Commission |
| GFI switch | Ground fault interrupter (German abbr.: FI) |
| FIX | Abbreviation for Fixer |
| SN | Serial Number, consecutive number to identify machines (German: FN) |
| GAL | Generic Array Logic |
| GFCI | Ground Fault Circuit Interrupter |
| GS | Printed circuit (German: Gedruckte Schaltung) |

| | |
|----------------------------|--|
| HT Process | High Throughput Process - shortest processing time (60 s) |
| IC | Integrated Circuit |
| IEC | International Electro-technical Commission |
| Immersion time DEV | Time a film spends in the developer solution. |
| Impeller | Blade wheel of the circulation pump |
| Info Logbook | Function of the machine software which records detailed information about an occurred problem in chronological sequence. |
| Infocounter | Program module of the machine software to save machine indications and operation data. |
| Interface | Defined interface between a device and software. |
| IP Process | Intermediate Process – medium processing time (90s) |
| IR | Infra-Red light |
| ISO | International Organization for Standardization |
| Jog-cycle | Replenishment of the set developer and fixer rate always after an hour without film development. |
| LCD | Liquid Crystal Display |
| LED | Light Emitting Diode |
| NEC | National Electrical Code |
| NFPA | National Fire Protection Association |
| OEM | Original Equipment Manufacturer |
| Offset current | The current increase measured by the current sensor of the film processor when an additional consumer switches on. |
| OMT | Object Modeling Technique |
| PAP hose | Exhaust hose made of cardboard – aluminum – cardboard |
| PCB | Printed Circuit Board, (in German “GS”) |
| PE | Protective Earth |
| PG screw connection | Heavy-duty screw connection (strain relief for cables) |
| PLD | Programmable Logic Device |
| PLLC | Plastic Leadless Chip Carrier, solder-free plastic socket for chips with contact faces on all four sides |
| RAM | Random Access Memory, working memory of a CPU |

| | |
|----------------------|---|
| Replenishment | Supply of developer, fixer, or water, to replenish the respective solutions |
| RP Process | Regular Process Standard processing time (2min) |
| Sensitometry | Procedure to check the sensitivity of photographic plates and films. |
| Shockwatch | Indicator, which indicates if the machine was exposed to illegally strong impacts. |
| SOLO | Machine version Classic E.O.S. Type 5270/100 designed for standalone operation. |
| TEACH IN | Program module of the machine software to determine current reference values (only in machines with current sensor). |
| Tiltwatch | Indicator, which indicates if the machine was tilted. |
| Timeout | If a function cannot be carried out within a given monitored time frame, the functional sequence or the complete machine will be stopped. |
| VDE | Institution of German electricians |
| WAT | Water, abbreviation |

Order No.:
DD+DIS301.03E

Classic E.O.S.

Type 5270 / 100 as of SN 4500

Classic E.O.S. CL

Type 5270 / 105 as of SN 1138

6th Edition

